EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger Air Rotary	Boring No. MW-1
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1314	1440
Reference				6/3/10	6/4/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					2			SM	0-4" Dark brown fine SILTY SAND (topsoil). Dense, dry, well sorted.
0-2	24/11			0.0	2	1		SP	4-11" Moderate yellowish brown fine SAND, little silt and coarse sand.
					3				Dense, dry, well sorted.
					3	2			
					3			SP	0-20" Moderate yellowish brown fine SAND, little coarse sand and silt.
2-4	24/20			0.0	3	3			Dense, dry, well sorted.
					4				
					5	4			
					3			SP	0-16" Light reddish brown fine SAND, little coarse sand, trace silt.
4-6	24/16			0.0	4	5			Dense, dry, well sorted.
					4				
					3	6			
					3			SM	0-20" Yellowish brown very fine SAND and SILT, little clay. Dense, dry,
6-8	24/20			0.0	4	7			well sorted.
					4				
					3	8			
					2			SP	0-22" Yellowish brown very fine SAND, little silt. Dense. Slightly moist
8-10	24/22			0.0	4	9			well sorted.
					3				
					4	10			
					3			SP	0-19" Brownish yellow very fine SAND, some silt, little coarse sand/
10-12	24/19			0.0	3	11			saprolite. Dense, slightly moist, moderately well sorted.
					3				
					10	12			
					5			SM	0-7" Brownish yellow very fine SAND and SILT, little clay. Dense, dry,
12-14	24/23			0.0	11	13			well sorted.
					14			SP	7-23" Yellowish red fine SAND, little silt and saprolite. Dense, dry, well
					12	14			sorted.
			Gude-MW1B		4			ML	0-5" Brownish yellow SILT, little fine sand. Dense, dry, well sorted.
14-16	24/24		SO-14-16	0.0	6	15		SP	5-24" Red medium to coarse SAND/SAPROLITE. Dense, dry, well
					12				sorted.
					12	16			
					14			SP	0-15" Yellowish red fine to medium SAND, little silt. Dense, dry, well
16-18	24/15			0.0	25	17			sorted.
					50/5				
						18			
					11			ML	0-8" Yellowish red fine SANDY SILT. Dense, dry, well sorted.
18-20	24/19			0.0	27	19		SP	8-19" Light yellowish brown fine to medium SAND, little coarse sand.
					50/5				Dense, dry, well sorted.
						20			

Logged by: Joseph Sawicki Date: 6/3/2010-6/4/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-1
Sampling Method:		
	Continuous Split Spoons	Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1314	1440
Reference				6/3/10	6/4/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					12			SP	0-18" Brown fine to medium SAND, little coarse sand/saprolite. Dense,
20-22	24/18			0.0	25	21			dry, well sorted.
					35				
					42	22			
					10			SP	0-17" Dark yellowish brown fine SAND, little coarse sand and silt. Very
22-24	24/17			0.0	19	23			dense, dry, well sorted.
					50/5				
						24			
					9			SP	0-10" Light brown fine SAND, some silt. Dense, dry, well sorted.
24-26	24/24			0.0	11	25		SP	10-24" Light yellowish brown fine to medium SAND, some coarse sand.
					14				Dense, dry, well sorted. Little dark brown staining.
					16	26			
					31			SP	0-13" Dark yellowish brown fine SAND. Very dense, dry, well sorted.
26-28	24/13			0.0	50/5	27			
						28			
					25			SP	0-22" Light yellowish brown very fine SAND. Very dense, dry, well sorted.
28-30	24/22			0.0	36	29			
					50/5				
						30			Split Spoon Sampling Discontinued-30 Feet
						40			Rock
						50			
						60			
						70			
						80			
						90			
									End of Boring 98.5 feet
						100			
						110			
						120			
						130			
						140			Note: Depth Scale Changes to 10-foot Intervals at 30 feet

Logged by: Joseph Sawicki Date: 6/3/2010-6/4/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method: Hollow Stem Auger		Boring No. MW-2A
Air Rotary		
Sampling Method: Continuous Split Spoons		Sheet 1 of 2
		Drilling

				Start	Finish
Water Level					
Time	-				
Date				0828	0915
Reference				6/8/10	6/9/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					2			SM	0-4" Dark brown SILTY SAND (topsoil). Slightly dense, dry, well sorted.
0-2	24/17			0.0	3	1		ML	4-17" Medium brown SILT, trace fine sand and clay. Dense, dry,
					3				well sorted.
					3	2			
					5			ML	0-24" Reddish brown SILT, little very fine sand. Dense, dry, well sorted.
2-4	24/24			0.0	8	3			
					11				
					12	4			
					4			SP	0-22" Light reddish brown fine SAND, some silt, trace coarse sand.
4-6	24/22			0.0	4	5			Dense, dry, well sorted.
					6				
					10	6			
					6			SP	0-17" Pale yellowish brown very fine SAND, some silt. Dense, dry, well
6-8	24/17			0.0	9	7			sorted.
					9				
					11	8			
					4			SM	0-23" Light reddish brown very fine SILTY SAND. Dense, dry, well
8-10	24/23			0.0	6	9			sorted.
					8				
					8	10			
					12			ML	0-6" Reddish brown SILT, little fine sand, trace clay. Dense, dry, well
10-12	24/19			0.0	26	11			sorted.
					29			SP	6-19" Reddish brown very fine SAND, little silt. Very dense, partially
					14	12			consolidated, dry, well sorted.
			Gude-MW2A		3			SM	0-24" Light yellowish brown very fine SILTY SAND. Very dense, dry,
12-14	24/24		SO-12-14	0.0	4	13			well sorted.
					7				
					17	14			
					7			SM	0-16" Moderate yellowish brown very fine SILTY SAND. Very dense,
14-16	17/16			0.0	26	15			slightly dense, well sorted.
					50/5				
						16			
					35			SP	0-9" Pale yellowish brown very fine SAND, some silt. Very dense, dry,
16-18	11/9			0.0	50/5	17			well sorted.
						18			
					19			SP	0-16" Moderate yellowish brown very fine SAND, some silt. Very dense,
18-20	11/16			0.0	50/5	19			partially consolidated, dry, well sorted.
						20			

Logged by: Joseph Sawicki Date: 6/8/2010-6/9/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-2A
Sampling Method:		
	Continuous Split Spoons	Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				0828	0915
Reference				6/8/10	6/9/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					19			SP	0-19" Moderate yellowish brown very fine SAND, some silt. Very dense,
20-22	19/19			0.0	35	21			partially consolidated, dry, well sorted.
					50/5				
						22			
					15			SP	0-18" Moderate yellowish brown very fine to medium SAND, some silt.
22-24	17/18			0.0	34	23			Very dense, partially consolidated, dry, well sorted.
					50/5				
						24			
					28			ML	0-7" Dark brown SILT, little very fine sand. Very dense, slightly moist,
24-26	8/11			0.0	50/2	25			well sorted.
									7-11" Pale yellowish brown weathered SANDSTONE. Very dense,
						26			partially consolidated, dry, well sorted.
									Split Spoon Sampling Discontinued-26 feet
						27			
						28			Rock
						29			
						30			
						40			
						50			
						60			
						70			
									End of Boring -75 Feet
						80			
						90			
						100			
						110			
						120			
						130			
						140			Note: Depth scale changes to 10-foot intervals at 30 feet

Logged by: Joseph Sawicki Date: 6/8/2010-6/9/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-2B
Sampling Method:		
	Continuous Split Spoons	Sheet 1 of 2
		Drilling

				Start	Finish
Water Level					
Time	-			1400	1320
Date				6/9/10	6/17/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					2			SM	0-6" Dark brown topsoil, SILTY SAND, some roots and organic matter.
0-2	24/9			0.0	3	1			Loose, dry, well sorted.
					4			SM	6-9" Yellowish brown very fine SAND and SILT. Moderately dense,
					4	2			dry, well sorted.
					5			ML	0-15" Light reddish brown very fine SANDY SILT. Dense, dry, well
2-4	24/15			0.0	6	3			sorted.
					9				
					9	4			
					6			ML	0-17" Light reddish brown very fine SANDY SILT. Very dense, dry, well
4-6	24/17			0.0	9	5			sorted.
					9				
					10	6			
					6			ML	0-8" Light reddish brown very fine SANDY SILT. Very dense, dry, well
6-8	24/13			0.0	10	7			sorted.
					14			SP	8-13 Yellowish brown very fine SAND, some silt. Dense, dry, well sorted.
					15	8			
					6			ML	0-8" Reddish yellow brown SILT, little very fine sand. Very dense, dry,
8-10	24/18			0.0	10	9			well sorted.
					29			SP	8-18" Reddish yellow brown very fine SAND, little silt. Very dense, dry,
					31	10			well sorted.
					8			ML	0-9" Light reddish brown very fine SANDY SILT, little clay. Very dense,
10-12	24/23			0.0	10	11			dry, well sorted.
					17			SP	9-23" Reddish yellow brown very fine SAND, little silt, trace clay. Very
					19	12			dense, dry, well sorted.
			Gude-MW2B		4			SM	0-18" Light reddish brown very fine SILTY SAND, trace clay. Very
12-14	24/18		SO-14-16	0.0	8	13			dense, dry, well sorted.
					13				
					15	14			
					5			SM	0-20" Light reddish brown very fine SILTY SAND. Very dense, dry, well
14-16	24/20			0.0	13	15			sorted.
					23				
					30	16			
					13			SP	0-5" Dark reddish brown very fine SAND, some silt. Very dense, dry,
16-18	11/5			0.0	50/5	17			well sorted.
						18			
					12			SP	0-20" Rusty Red very fine SAND, some silt. Very dense, partially
18-20	17/20			0.0	29	19			consolidated, dry, well sorted.
					50/5				
						20			

Logged by: Joseph Sawicki Date: 6/9/2010-6/17/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-2B
Sampling Method:		
	Continuous Split Spoons	Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-			1400	1320
Date				6/9/10	6/17/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					10			SM	0-9" Reddish brown very fine SILTY SAND. Dense, dry, well sorted.
20-22	17/21			0.0	29	21			9-21" Rock
					50/5				Split Spoon Sampling Discontinued- 21 feet
						22			
						23			Rock
						24			
						25			
						26			
						27			
						28			
						29			
						30			
						40			
						50			
						60			
						70			
						80			
						90			
						100			
						110			End of Boring- 108 feet
						120			
						130			
						140			Note: Depth Scale Changes to 10-foot Intervals at 30 feet.

Logged by: Joseph Sawicki Date: 6/9/2010-6/17/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-3A
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				0805	0915
Reference				6/18/10	6/18/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
			Gude-MW3A		4			SM	0-3" Dark brown topsoil, fine SILTY SAND. Dense, moist, well sorted.
0-2	12/12		SO-0-2	1.5	5	1		SM	3-12" Moderate yellowish brown fine SILTY SAND. Dense, moist,
					Rock				well sorted. Brick fragments.
						2			
					4			ML	0-8" Moderate yellowish brown SILT, some very fine sand. Dense,
2-4	24/24			0.7	3	3			moist, well sorted.
					4			ML	8-24" Light grayish brown SILT, some fine sand, trace cobbles. Dense,
					4	4			moist, well sorted.
					4			SM	0-20" Moderate yellowish brown SILTY SAND, trace cobbles. Dense,
4-6	24/20			0.0	5	5			moist, well sorted.
					7				
					8	6			
					6			SM	0-13" Moderate yellowish brown SILTY SAND, trace cobbles. Dense,
6-8	24/13			0.0	7	7			moist, well sorted.
					8				
					7	8			
					4			SM	0-16" Moderate yellowish brown fine to medium SILTY SAND, trace
8-10	24/16			0.3	6	9			cobbles. Dense, moist, moderately well sorted.
					6				
					7	10			
					2			SM	0-17" Moderate yellowish brown fine to medium SILTY SAND, trace
10-12	24/17			1.4	3	11			cobbles. Dense, very moist, moderately well sorted.
					4				
					6	12			
					2			SP	0-18" Moderate yellowish brown fine SAND, little silt, trace cobbles.
12-14	24/18			0.2	2	13			Dense, wet, well sorted.
					2				
					2	14			
					7			SP	0-18 Moderate yellowish brown fine to medium SAND, little silt, trace
14-16	24/18			0.0	9	15			gravel. Dense, wet, moderately well sorted.
					9				
					9	16			
					10			ML	0-7" Pale yellowish brown medium to coarse SANDY SILT. Moderately
16-18	24/19			0.2	23	17			dense, very wet, well sorted.
					33			SP	7-19" Pale yellowish brown medium to fine SAND, some silt, trace
					50/5	18			gravel. Very dense, dry, well sorted.
					43			SP	0-10" Moderate yellowish brown very fine SAND, little silt. Very dense,
18-20	10/10			0.0	50/4	19			dry, well sorted.
						20			

Logged by: Joseph Sawicki Date: 06/18/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger / Air Rotary	Boring No. MW-3A
Sampling Method:	Continuous Split Spoons	Sheet 2 of 2
		Drilling

Water Level				Start	Finish
Time	-				
Date				0805	0915
Reference				6/18/10	6/18/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					19			SP	0-3" Pale yellowish brown very fine SAND, little medium to coarse sand,
20-22	11/3			0.0	50/5	21			silt, and large cobbles. Very dense, partially consolidated, dry, poorly
									sorted.
						22			
					33			SP	0-11" Pale yellowish brown fine SAND, some medium to coarse sand.
22-24	11/11			0.0	50/5	23			Very dense, partially consolidated, dry, moderately well sorted.
						24			
					50/3			SP	0-3" Pale yellowish brown fine SAND and rock fragments. Very dense,
24-26	3/3			0.0		25			dry, moderately well sorted.
									End of Boring - 25 feet
						26			
						27			
						28			
						29			
						30			
						31			
						32			
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			
						41			

Logged by: Joseph Sawicki Date: 06/18/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-3B
Sampling Method:		
	Continuous Split Spoons	Sheet 1 of 2
		Drilling

Water Level				Start	Finish
Time	-				
Date				1210	1250
Reference				6/18/10	6/22/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					6			ML	0-6" Topsoil, Moderate brown SILT, little fine sand and organics. Dense,
0-2	24/11			0.5	5	1			moist, well sorted.
					3			SM	6-11" Light grayish brown fine SILTY SAND, little medium to coarse sand,
					3	2			trace cobbles. Dense, moist, Moderately well sorted.
					2			ML	0-16" Moderate yellowish brown fine SANDY SILT. Dense, moist,
2-4	24/16			0.2	3	3			well sorted.
					5				
					5	4			
					3			SM	0-18" Pale yellowish brown fine SILTY SAND, little coarse sand and
4-6	24/18			0.0	4	5			gravel. Very dense, moist, well sorted.
					4				
					6	6			
					8			SP	0-17" Moderate yellowish brown fine SAND, some coarse sand, gravel,
6-8	24/17			0.2	9	7			and silt. Very dense, slightly moist, poorly sorted.
					9				
					11	8			
					3			SM	0-13" Moderate yellowish brown very fine SILTY SAND. Dense,
8-10	24/17			0.0	5	9			slightly moist, well sorted.
					4			SM	13-17" Moderate yellowish brown fine SILTY SAND, little coarse sand
					5	10			and gravel. Dense, moist, poorly sorted.
					6			SM	0-15" Dark yellowish brown fine SILTY SAND, some coarse sand and
10-12	24/15			0.1	8	11			gravel, trace large cobbles. Dense, very moist, poorly sorted.
					9				
					9	12			
			Gude-MW3B		4			ML	0-10" Moderate yellowish brown SILT, some fine to medium sand.
12-14	24/20		SO-12-14	0.7	7	13			Dense, moist, well sorted.
			DUP 2		9			SP	10-20" Pale yellowish brown fine SAND, some silt, little coarse sand and
					12	14			gravel. Dense, slightly moist, moderately well sorted.
					7			SM	0-8" Moderate yellowish brown fine SILTY SAND, trace gravel. Dense,
14-16	24/20			0.0	7	15			moist, well sorted.
					9			SP	8-20" Pale yellowish brown very fine SAND, little silt. Dense, moist,
					7	16			well sorted.
					17			SP	0-20" Pale yellowish brown very fine SAND, little silt. Dense, wet, well
16-18	24/20			0.3	19	17			sorted.
					27				
					27	18			
					32			SP	0-10" Pale yellowish brown very fine SAND, little silt. Dense, wet, well
18-20	11/10			0.0	50/5	19			sorted.
						20			
									Split Spoon Sampling Discontinued- 20 feet

Logged by: Joseph Sawicki Date: 6/18/2010-6/22/10

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger Air Rotary	Boring No. MW-3B
Sampling Method:	Continuous Split Spoons	Sheet 2 of 2
		Drilling

Water Level				Start	Finish
Time	-			1210	1250
Date				6/18/10	6/22/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	
									Surface Conditions: Topsoil
						20			Note: Depth Scale Changes to 10-foot Intervals at 20 feet.
						30			
						40			Rock
						50			
						60			
						70			
						80			
						90			
						100			End of Boring - 96 feet
						110			
						120			
						130			
						140			
						150			
						160			
						170			
						180			
						190			
						200			
						210			
						220			

Logged by: Joseph Sawicki Date: 6/18/2010-6/22/10

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method: Hollow Stem Auger		Boring No. MW-4
Sampling Method: Continuous Split Spoons		Sheet 1 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				0840	1000
Reference				7/6/10	7/6/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Asphalt
					6			SM	0-13" Dark brown SILTY SAND, little coarse sand and gravel. Slightly
0-2	24/13			13.2	9	1			dense, moist, moderately well sorted.
					11				
					12	2			
			Gude-MW4		3			SM	0-6" Moderate yellowish brown SILTY SAND. Slightly dense, dry,
2-4	24/12		SO-2-4	13.2	2	3			well sorted.
					4			SP	6-12" Moderate yellowish brown fine to medium SAND. Loose, dry,
					4	4			well sorted.
					3			SM	0-12" Dark brown very fine SILTY SAND, little gravel. Dense, moist,
4-6	24/12			6.3	6	5			moderately well sorted.
					6				
					6	6			
					3			SM	0-10" Dark brown very fine SILTY SAND, little gravel. Moderately dense,
6-8	24/10			2.8	4	7			moist, moderately well sorted.
					4				
					2	8			
					2			SM	0-6" Dark brown very fine SILTY SAND, little gravel. Moderately dense,
8-10	24/6			1.6	2	9			dry, moderately well sorted.
					2				
					3	10		SP	
					5				0-8" Moderately yellowish brown fine to medium SAND, some coarse
10-12	24/8			1.5	5	11			sand, little gravel and silt. Loose, very wet, poorly sorted.
					8				
					9	12			
					5				NO RECOVERY
12-14	23/0			--	17	13			
					30				
					50/5	14			
					5			SP	0-13" Pale yellowish brown very fine SAND, little silt and cobbles. Very
14-16	23/13			2.6	18	15			dense. Slightly moist, well sorted.
					35				
					50/5	16			
					5			SP	0-15" Pale yellowish brown very fine SAND, little coarse sand, gravel, silt
16-18	23/15			2.6	17	17			and cobbles. Very dense. Slightly moist, poorly sorted.
					33				
					50/5	18			
					10			SP	0-15" Pale yellowish brown very fine SAND, little coarse sand, gravel, silt
18-20	23/15			3.9	19	19			and cobbles. Very dense. Slightly moist, poorly sorted. Little dark
					36				brown staining.
					50/5	20			

Logged by: Joseph Sawicki Date: 07/06/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method: Hollow Stem Auger		Boring No. MW-4
Sampling Method: Continuous Split Spoons		Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-			0840	1000
Date				7/6/10	7/6/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Asphalt
					7			SM	0-19" Pale brown fine SILTY SAND, little coarse sand and gravel. Dense,
20-22	24/19			4.3	16	21			wet, moderately well sorted.
					25				
					35	22			
					14			SP	0-19" Pale brown very fine SAND, some silt, trace gravel. Dense, moist,
22-24	24/19			3.4	25	23			moderately well sorted.
					50/5				
						24			
					4			SP	0-15" Pale brown very fine SAND, some silt, trace gravel and cobbles.
24-26	42/15			5.3	10	25			Moderately dense, moist, moderately well sorted.
					10				End of Boring - 26 feet
					11	26			
						27			
						28			
						29			
						30			
						31			
						32			
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			
						41			

Logged by: Joseph Sawicki Date: 07/06/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-6
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2

				Drilling	
Water Level				Start	Finish
Time	-			1103	1315
Date				6/22/10	6/22/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					8			SP	0-16" Light reddish brown fine SAND, some silt. Dense, dry, well sorted.
0-2	18/16			0.0	5	1			
					7				
						2			
					27			SM	0-13" Light reddish brown very fine SAND and SILT. Dense, dry, well
2-4	18/13			0.0	10	3			sorted.
					10				
						4			
					12			SM	0-13" Light reddish brown very fine SAND and SILT. Moderately dense,
4-6	18/13			0.0	13	5			dry, well sorted.
					17				
						6			
					25			SP	0-17" Reddish brown very fine SAND, some silt. Moderately dense, dry,
6-8	18/17			0.0	20	7			well sorted.
					18				
						8			
					5			SP	0-6" Reddish brown very fine SAND, some silt. Moderately dense, dry,
8-10	24/20			0.0	4	9			well sorted.
					6			CL	6-20 Reddish brown CLAY, little fine sand and silt. Dense, moist,
					7	10			well sorted.
					5			SC	0-15" Reddish brown very fine CLAYEY SAND. Dense, dry, well sorted.
10-12	24/15			0.0	5	11			
					6				
					8	12			
			Gude-MW6		2			CL	0-15" reddish brown CLAY, little very fine sand and silt. Moderately
12-14	24/15		SO-12-14	0.0	3	13			dense, wet, well sorted. Some black staining.
					3				
					8	14			
					5			SC	0-18" Reddish brown fine to medium CLAYEY SAND. Moderately dense,
14-16	24/18			0.0	8	15			wet, well sorted. Little black bands of staining.
					3				
					2	16			
					10			SC	0-22" Reddish brown fine to very fine CLAYEY SAND. Moderately dense,
16-18	24/22			0.0	11	17			wet, well sorted. Little black bands of staining.
					14				
					13	18			
					8			SC	0-19" Reddish brown fine CLAYEY SAND. Moderately dense, wet
18-20	24/19			0.0	9	19			well sorted. Some black bands of staining.
					8				
					9	20			

Logged by: Joseph Sawicki Date: 06/22/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method: Hollow Stem Auger		Boring No. MW-6
Sampling Method: Continuous Split Spoons		Sheet 2 of 2
		Drilling

Water Level				Start	Finish
Time	-				
Date				1103	1315
Reference				6/22/10	6/22/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					9			SC	0-20" Reddish brown fine CLAYEY SAND. Moderately dense, wet
20-22	24/20			0.0	12	21			well sorted. Some black bands of staining.
					13				
					18	22			
					5			SC	0-7" Moderate yellowish brown fine to medium CLAYEY SAND. Dense,
22-24	24/22			0.0	7	23			moist, well sorted.
					7			CL	7-22" White fine to medium SANDY CLAY. Dense, wet, well sorted.
					12	24			Red and brown bands of sandy clay throughout.
					11			SC	0-12" Moderate yellowish brown fine to medium CLAYEY SAND. Dense,
24-26	24/22			0.0	10	25			moist, well sorted.
					8			SC	12-22" White fine to medium CLAYEY SAND. Very dense, moist,
					9	26			well sorted.
									End of Boring - 26 feet
						27			
						28			
						29			
						30			
						31			
						32			
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			
						41			

Logged by: Joseph Sawicki Date: 06/22/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-7
Sampling Method:		
	Continuous Split Spoons	Sheet 1 of 2
		Drilling

				Start	Finish
Water Level					
Time	-			1245	1430
Date				6/23/10	6/24/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					5			SM	0-14" Light reddish brown very fine SILTY SAND, trace organic matter.
0-2	24/14			0.0	10	1			Moderately dense, dry, well sorted.
					10				
					11	2			
					3			SM	0-14" Moderate reddish brown very fine SILTY SAND, trace organic
2-4	24/14			0.0	4	3			matter. Moderately dense, dry, well sorted.
					4				
					5	4			
					4			SP	0-18" Moderate reddish brown very fine SAND, some silt. Dense,
4-6	24/18			0.6	5	5			slightly moist, well sorted.
					6				
					6	6			
					7			SP	0-12" Pale yellowish brown very fine SAND, little silt. Very dense, dry,
6-8	24/12			0.8	7	7			well sorted.
					12				
					17	8			
			Gude-MW7		5			SP	0-20" Pale yellowish brown very fine SAND, little medium sand and silt.
8-10	24/20		SO-8-10	2.3	4	9			Moderately dense, slightly moist, well sorted.
					4				
					5	10			
					3			SP	0-5" Pale yellowish brown very fine SAND, little medium sand and silt.
10-12	19/12			1.2	29	11			Moderately dense, slightly moist, well sorted.
					50/5			SP	5-12" White very fine SAND, little silt. Very dense, partially consolidated,
						12			dry, well sorted.
					50/5				
12-14	24/0			--		13			NO RECOVERY
						14			
					50/3			SP	0-3" Light gray/white very fine SAND, little silt. Dense, partially
14-16	3/3			0.0		15			consolidated, dry, well sorted.
						16			Split Spoon Sampling Discontinued- 16 feet
16-18						17			Rock
						18			
18-20						19			
						20			

Logged by: Joseph Sawicki Date: 6/23/2010-6/24/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-7
Sampling Method:		
	Continuous Split Spoons	Sheet 2 of 2
		Drilling

Water Level				Start	Finish
Time	-			1245	1430
Date				6/23/10	6/24/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	
									Surface Conditions: Topsoil
						20			
						30			
						40			Rock
						50			
						60			End of Boring - 58 feet
						70			
						80			
						90			
						100			
						110			
						120			
						130			
						140			
						150			
						160			
						170			
						180			
						190			
						200			
						210			
						220			Note: Depth Scale Changes to 10-foot Intervals at 20 feet.

Logged by: Joseph Sawicki Date: 6/23/2010-6/24/10

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-8
Sampling Method:		
	Continuous Split Spoons	Sheet 1 of 2
		Drilling

				Start	Finish
Water Level					
Time	-			0915	1100
Date				6/23/10	6/23/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					5			ML	0-18" Moderate yellowish brown SILT, some clay, little very fine sand.
0-2	24/18			0.0	4	1			Dense, moist, well sorted.
					5				
					5	2			
					4			ML	0-14" Moderate yellowish brown SILT, some clay, little very fine sand.
2-4	24/14			0.0	4	3			Dense, moist, well sorted.
					3				
					3	4			
					5			ML	0-16" Moderate reddish brown SILT, some clay, little fine to medium
4-6	24/16			0.0	4	5			Dense, moist, well sorted. Little black staining.
					5				
					6	6			
					8			ML	0-14" Moderate reddish brown SILT, some clay, little fine to medium
6-8	24/14			0.0	13	7			sand. Very dense, moist, well sorted. Some black staining.
					13				
					14	8			
			Gude-MW8		4			ML	0-20" Moderate reddish brown SILT, some clay, little fine to medium
8-10	24/20		SO-8-10	0.0	7	9			sand. Very dense, moist, well sorted. Some black staining.
					7				
					8	10			
					3			ML	0-2" Moderate reddish brown SILT, some clay, little fine to medium
10-12	24/13			0.0	7	11			sand. Very dense, moist, well sorted. Some black staining.
					7			SP	2-13" Moderate yellowish brown very fine SAND, little silt. Dense, dry,
					8	12			well sorted.
					5				0-19" Moderate yellowish brown very fine SAND, little silt. Dense, dry,
12-14	24/19			0.0	6	13		SP	well sorted.
					11				
					13	14			
					5			SP	0-15" Moderate yellowish brown very fine SAND, some silt. Dense, dry,
14-16	24/15			0.0	7	15			well sorted.
					13				
					15	16			
					14			SP	0-12" Moderate yellowish brown very fine SAND, little silt. Very dense,
16-18	24/12			0.0	20	17			partially consolidated, dry, well sorted.
					24				
					26	18			
					17			SP	0-12" Moderate yellowish brown very fine SAND, little silt. Very dense,
18-20	9/12			0.0	50/5	19			partially consolidated, dry, well sorted.
						20			

Logged by: Joseph Sawicki Date: 06/23/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-8
Sampling Method:		
	Continuous Split Spoons	Sheet 2 of 2
		Drilling

				Start	Finish
Water Level					
Time	-			0915	1100
Date				6/23/10	6/23/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					18			SP	0-8" Moderate yellowish brown very fine SAND, little silt. Very dense,
20-22	10/8			0.0	50/4	21			partially consolidated, dry, well sorted.
						22			
					34			ML	0-12" Pale brown SILT, some coarse sand, little fine sand. Very loose,
22-24	17/17			0.0	24	23			wet, moderately sorted.
					50/5			SP	12-17" Pale brown very fine SAND. Dense, partially consolidated, moist,
						24			well sorted.
									Split Spoon Sampling Discontinued- 24 feet
						25			
									Rock
						26			
						27			
						28			
						29			
						30			End of Boring- 30 feet
						31			
						32			
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			
						41			

Logged by: Joseph Sawicki Date: 06/23/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-9
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1244	1435
Reference				7/6/10	7/6/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Asphalt
					3				0-2" Asphalt
0-2	24/21			2.6	6	1		ML	2-21" Reddish brown SILT, little fine to coarse sand and clay. Very
					7				dense, dry, poorly sorted.
					9	2			
					4			SM	0-17" Reddish brown very fine SANDY SILT, little coarse sand and
2-4	24/17			2.5	6	3			gravel. Very dense, dry, well sorted.
					7				
					10	4			
					8			SM	0-13" Moderate yellowish brown very fine SILTY SAND, trace cobbles.
4-6	24/13			3.7	9	5			Dense, dry, well sorted.
					9				
					10	6			
					7			SM	0-15" Pale yellowish brown very fine SILTY SAND, trace cobbles.
6-8	24/15			2.6	8	7			Dense, dry, well sorted. Trace black staining, likely organic.
					9				
					9	8			
					7			SM	0-15" Pale yellowish brown very fine SILTY SAND, trace cobbles.
8-10	24/15			2.6	7	9			Dense, dry, well sorted. Trace black staining, likely organic.
					8				
					10	10			
					4			SM	0-22" Pale yellowish brown very fine SILTY SAND. Dense, dry,
10-12	24/22			4.0	8	11			well sorted.
					12				
					14	12			
					4			SM	0-18" Pale yellowish brown very fine SILTY SAND. Dense, dry,
12-14	24/18			3.6	7	13			well sorted.
					9				
					10	14			
					4			SM	0-15" Moderate yellowish brown very fine SILTY SAND. Dense, dry,
14-16	24/15			2.1	12	15			well sorted.
					18				
					20	16			
					5			SM	0-21" Moderate yellowish brown very fine SILTY SAND. Dense, moist,
16-18	24/21			2.8	7	17			well sorted.
					12				
					15	18			
					9			SM	0-20" Moderate yellowish brown very fine SILTY SAND, trace coarse
18-20	23/20			4.1	20	19			sand and quartz cobbles. Dense, moist, well sorted.
					35				
					50/5	20			

Logged by: Joseph Sawicki Date: 07/06/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-9
Sampling Method:	Continuous Split Spoons	Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1244	1435
Reference				7/6/10	7/6/10

Surface Conditions: Asphalt

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet	USCS Log	
							SM	0-21" Moderate yellowish brown very fine SILTY SAND. Moderately
20-22	24/21		Gude-MW9 -SO-20-22	4.7		21		dense, moist, well sorted.
						22		
							SM	0-22" Pale yellowish brown very fine SITLY SAND. Moderately dense,
22-24	24/22			3.5		23		moist, well sorted. Little black staining.
						24		
							SM	0-18" Pale yellowish brown very fine SITLY SAND. Moderately dense,
24-26	24/18			1.2		25		moist, well sorted. Little black staining.
						26		End of Boring - 25 feet
						27		
						28		
						29		
						30		
						31		
						32		
						33		
						34		
						35		
						36		
						37		
						38		
						39		
						40		
						41		

Logged by: Joseph Sawicki Date: 07/06/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-10
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2
		Drilling

Water Level				Start	Finish
Time	-			0920	1050
Date				7/2/10	7/2/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet	USCS Log	Surface Conditions: Grass
					4		OL	0-12" Dark brown SILT, little fine sand and organic matter. Dense, dry,
0-2	24/12			0.0	6	1		well sorted.
					6			
					6	2		
					4		OL	0-6" Dark brown SILT, little fine sand and organic matter. Dense, dry,
2-4	24/17			0.0	5	3		well sorted.
					7		ML	6-17" Light gray and light brown CLAYEY SILT. Dense, dry, well sorted.
					8	4		
					3		ML	0-17" Light gray and light brown CLAYEY SILT. Very dense, dry,
4-6	24/17			0.0	3	5		well sorted.
					4			
					6	6		
					6		ML	0-21" Light gray and light brown CLAYEY SILT, little fine to medium
6-8	24/21			0.0	9	7		sand. Very dense, dry, well sorted.
					9			
					10	8		
					4		ML	0-9" Light gray and light brown CLAYEY SILT. Very dense, dry,
8-10	24/17			0.0	4	9		well sorted.
					4		ML	9-17" Dark brown very fine SANDY SILT, little clay. Moderately dense,
					4	10		moist, well sorted.
					4		SM	0-15" Dark brown very fine SILTY SAND. Moderately dense, moist,
10-12	24/15			0.0	4	11		well sorted.
					5			
					6	12		
					4		SM	0-16" Dark brown very fine SILTY SAND. Moderately dense, moist,
12-14	24/16			0.1	4	13		well sorted.
					7			
					8	14		
					5		SM	0-17" Dark brown very fine SILTY SAND, trace quartz cobbles.
14-16	24/17			0.6	7	15		Moderately dense, moist, well sorted.
					6			
					7	16		
					6		SM	0-18" Pale yellowish brown very fine SAND, some silt, trace quartz
16-18	24/18			1.1	7	17		cobbles. Slightly dense, moist, well sorted.
					7			
					8	18		
			Gude-MW10		3		SM	0-17" Dark brown very fine SAND, some silt, trace quartz cobbles.
18-20	24/17		-SO-18-20	1.8	3	19		Slightly dense, moist, well sorted.
					4			
					4	20		

Logged by: Joseph Sawicki Date: 07/02/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger Air Rotary	Boring No. MW-10
Sampling Method:	Continuous Split Spoons	Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-			0920	1050
Date				7/2/10	7/2/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Grass
					3			SM	0-17" Moderate yellowish brown very fine SILTY SAND. Dense,
20-22	24/17			1.4	3	21			moist, well sorted.
					5				
					6	22			
					7			SM	0-18" Moderate yellowish brown very fine SILTY SAND. Dense,
22-24	24/18			1.1	11	23			moist, well sorted.
					16				
					18	24			
						25			End of Boring- 25 feet
						26			
						27			
						28			
						29			
						30			
						31			
						32			
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			
						41			

Logged by: Joseph Sawicki Date: 07/02/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-11A
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2

				Drilling	
Water Level				Start	Finish
Time	-			1430	1556
Date				6/29/10	6/29/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Grass
					3			ML	0-19" Moderate yellowish brown SILT, some very fine sand. Dense,
0-2	24/19			1.1	8	1			dry, well sorted. Little organic matter and roots.
					10				
					11	2			
					3			ML	0-18" Moderate yellowish brown SILT, some very fine sand. Moderately
2-4	24/18			1.2	6	3			dense, dry, well sorted. Little organic matter and roots.
					9				
					11	4			
					5			ML	0-16" Moderate yellowish brown SILT, some very fine sand, trace
4-6	24/16			1.6	9	5			coarse sand. Moderately dense, dry, well sorted.
					10				
					14	6			
					8			ML	0-18" Pale yellowish brown very fine SANDY SILT. Dense, slightly
6-8	24/18			2.2	11	7			moist, well sorted.
					16				
					20	8			
					6			ML	0-17" Pale yellowish brown very fine SANDY SILT, trace coarse sand.
8-10	24/17			1.8	9	9			Dense, dry, well sorted.
					14				
					20	10			
					9			ML	0-16" Pale yellowish brown SILT, some very fine sand, trace coarse
10-12	24/16			1.2	10	11			sand. Moderately dense, dry, well sorted.
					12				
					12	12			
					9			ML	0-18" Pale yellowish brown SILT, some very fine sand, trace coarse
12-14	24/18			2.0	9	13			sand. Moderately dense, dry, well sorted.
					9				
					8	14			
			Gude-MW11A		6			ML	0-19" Pale yellowish brown SILT, some very fine sand, trace clay
14-16	24/19		SO-14-16	2.6	7	15			Moderately dense, moist, well sorted.
					7				
					9	16			
					7			ML	0-20" Pale yellowish brown SILT, some very fine sand, trace clay
16-18	24/20			2.2	9	17			Moderately dense, moist, well sorted.
					12				
					13	18			
					6			ML	0-20" Pale yellowish brown SILT, some very fine sand, trace clay
18-20	24/20			1.8	7	19			Moderately dense, moist, well sorted.
					12				
					14	20			

Logged by: Joseph Sawicki Date: 06/29/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-11A
Sampling Method:		
	Continuous Split Spoons	Sheet 2 of 2
		Drilling

				Start	Finish
Water Level					
Time	-			1430	1556
Date				6/29/10	6/29/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Grass
					4			ML	0-19" Pale yellowish brown SILT, some very fine sand, trace clay
20-22	24/19			2.0	5	21			Moderately dense, moist, well sorted.
					8				
					8	22			
					4			ML	0-23" Moderate yellowish brown SILT, some very fine sand, trace
22-24	24/23			1.1	5	23			clay. Dense, moist, well sorted.
					9				
					10	24			
					14			ML	0-14" Pale yellowish brown very fine SANDY SILT. Very dense, dry,
24-26	23/14			0.6	20	25			well sorted.
					28				
					50/5	26			
					17			ML	0-23" Pale yellowish brown very fine SANDY SILT. Very dense, dry,
26-28	23/23			0.8	27	27			well sorted.
					36				
					50/5	28			
					32			ML	0-11" Pale yellowish brown very fine SANDY SILT. Very dense, moist,
28-30	11/11			0.0	50/5	29			well sorted.
						30			
					50/5			ML	0-5" Pale yellowish brown very fine SANDY SILT. Very dense, moist,
30-32	5/5			0.0		31			well sorted.
									End of Boring- 31 feet
						32			
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			
						41			

Logged by: Joseph Sawicki Date: 06/29/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger Air Rotary	Boring No. MW-11B
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2
		Drilling

Water Level				Start	Finish
Time	-				
Date				1020	1608
Reference				6/30/10	7/1/2010

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Grass
					5			ML	0-10" Moderate yellowish brown SILT, little fine to medium sand.
0-2	24/17			2.0	5	1			Dense, dry, well sorted.
					8			SM	10-17" Moderate yellowish brown very fine SANDY SILT. Dense, dry,
					10	2			well sorted. Little black organic staining.
					5			SM	0-15" Moderate yellowish brown very fine SANDY SILT. Dense, dry,
2-4	24/15			3.1	8	3			well sorted. Little black organic staining.
					15				
					16	4			
					5			SM	0-24" Moderate yellowish brown very fine SANDY SILT. Dense, dry,
4-6	24/24			3.9	9	5			well sorted.
					13				
					15	6			
					6			SM	0-19" Moderate yellowish brown very fine SANDY SILT. Dense, dry,
6-8	24/19			3.3	9	7			well sorted. Black staining 7-10".
					15				
					16	8			
					9			SM	0-20" Pale yellowish brown very fine SILTY SAND. Dense, dry, well
8-10	24/20			3.1	10	9			sorted. Little black staining.
					12				
					14	10			
					9			SM	0-19" Pale yellowish brown very fine SILTY SAND. Dense, dry, well
10-12	24/19			3.5	9	11			sorted. Little black staining.
					12				
					14	12			
					7			SM	0-19" Pale yellowish brown very fine SILTY SAND, some white very
12-14	24/19			4.6	9	13			fine sand. Dense, dry, well sorted. Little black staining.
					16				
					18	14			
					7			SM	0-21" Pale brown very fine SILTY SAND. Dense, moist, well sorted.
14-16	24/21			2.9	14	15			
					18				
					21	16			
					11			SM	0-17" Pale brown very fine SILTY SAND. Dense, moist, well sorted.
16-18	24/17			3.6	12	17			
					16				
					18	18			
			Gude-MW11B		7			SM	0-20" Pale yellowish brown very fine SILTY SAND. Dense, moist,
18-20	24/20		SO-18-20	3.9	7	19			well sorted.
			Dup-3		10				
					12	20			

Logged by: Joseph Sawicki Date: 6/30/10-7/1/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method: Hollow Stem Auger		Boring No.
Air Rotary		MW-11B
Sampling Method:		
Continuous Split Spoons		Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1020	1608
Reference				6/30/10	7/1/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Grass
					5			SM	0-18" Pale yellowish brown very fine SILTY SAND. Dense, very moist,
20-22	24/18			4.3	8	21			well sorted.
					14				
					16	22			
					5			SM	0-8" Pale yellowish brown very fine SILTY SAND. Dense, moist,
22-24	24/19			2.8	8	23			well sorted.
					14			ML	8-19" Reddish brown SILT, little very fine sand. Very dense, dry,
					18	24			well sorted. Little black staining.
					8			ML	0-13" Reddish brown SILT, little very fine sand. Very dense, dry,
24-26	24/19			2.3	14	25			well sorted. Little black staining.
					16			SM	13-19" Pale yellowish brown very fine SILTY SAND. Dense, moist,
					19	26			well sorted.
					12			SM	0-18" Pale yellowish brown very fine SILTY SAND. Dense, moist,
26-28	24/18			1.8	18	27			well sorted.
					20				
					25	28			
					25			SM	0-9" Pale yellowish brown very fine SILTY SAND. Dense, moist,
28-30	9/9			3.6	50/3	29			well sorted. Very dense in nose cone.
						30			
					25			SP	0-11" Moderate brown very fine SAND, little cobbles and silt. Very
30-32	11/11			2.1	50/5	31			dense, dry, well sorted.
						32			Split Spoon Sampling Discontinued- 31 feet
						40			
						50			Rock
						60			
						70			
						80			
						90			End of Boring 93 feet
						100			
						110			
						120			Note: Depth Scale Changes to 10-foot Intervals at 32 feet.

Logged by: Joseph Sawicki Date: 6/30/10-7/1/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-12
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2

				Drilling	
Water Level				Start	Finish
Time	-			1050	1225
Date				7/6/10	7/6/10
Reference					

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Asphalt
					3				0-2" Asphalt
0-2	24/16			1.9	8	1		SP	2-16" Moderate yellowish brown fine-medium SAND, little coarse sand
					11				and gravel. Moderately dense, dry, moderately well sorted.
					13	2			
					1			SP	0-24" Moderate yellowish brown fine-medium SAND, little coarse sand
2-4	24/24			2.4	7	3			and gravel, trace cobbles. Moderately dense, dry, moderately well sorted.
					8				
					10	4			
					10			SP	0-15" Moderate yellowish brown very fine SAND, trace gravel. Dense,
4-6	24/15			3.3	14	5			dry, well sorted.
					15				
					18	6			
					4			SP	0-13" Moderate yellowish brown very fine SAND, little sand, silt, and
6-8	24/13			2.8	8	7			gravel. Dense, dry, well sorted.
					9				
					12	8			
					7			SP	0-15" Pale yellowish brown very fine SAND, some silt. Slightly dense,
8-10	24/15			2.5	7	9			dry, well sorted.
					7				
					8	10			
					4			SP	0-15" Pale yellowish brown very fine SAND, some silt, trace cobbles.
10-12	24/15			2.8	7	11			Slightly dense, dry, well sorted. Trace black staining.
					7				
					8	12			
					4			SM	0-16" Moderate yellowish brown very fine SILTY SAND. Dense, moist,
12-14	24/16			2.7	6	13			well sorted.
					9				
					13	14			
					11			SM	0-7" Moderate yellowish brown very fine SILTY SAND. Dense, moist,
14-16	24/7			3.1	9	15			well sorted.
					15				
					21	16			
					10			SM	0-19" Moderate yellowish brown very fine SILTY SAND. Dense, moist,
16-18	24/19			4.7	11	17			well sorted. Some black staining from 9-13".
					12				
					14	18			
					11			SM	0-18" Moderate yellowish brown very fine SILTY SAND. Dense, moist,
18-20	24/18			5.6	6	19			well sorted.
					7				
					9	20			

Logged by: Joseph Sawicki Date: 07/06/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method: Hollow Stem Auger		Boring No. MW-12
Sampling Method: Continuous Split Spoons		Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1244	1432
Reference				7/6/10	7/6/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Asphalt
			Gude-MW12					SM	0-20" Moderate yellowish brown very fine SILTY SAND. Very dense,
20-22	24/20		-SO-20-22	5.7		21			moist, well sorted. Brown staining 18-20"
			Dup-4						
						22			
								SM	0-16" Moderate yellowish brown very fine SILTY SAND. Very dense,
22-24	9/16			7.5		23			moist, well sorted.
						24			
								SM	0-12" Moderate yellowish brown very fine SILTY SAND. Very dense,
24-26	17/12			5.1		25			moist, well sorted.
									End of Boring - 25 feet
						26			
						27			
						28			
						29			
						30			
						31			
						32			
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			
						41			

Logged by: Joseph Sawicki Date: 07/06/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-13A
Sampling Method:	Continuous Split Spoons	Sheet 1 of 2

Water Level				Drilling Start	Drilling Finish
Time	-				
Date				1007	1142
Reference				6/25/10	6/25/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					7			SM	0-21" Moderate brown very fine SILTY SAND, trace cobbles. Dense,
0-2	24/21			0.0	12	1			dry, well sorted. Large rock from 11-14".
					11				
					11	2			
					7			SM	0-11" Moderate brown very fine SILTY SAND, trace cobbles. Dense,
2-4	24/11			0.0	6	3			dry, well sorted.
					6				
					7	4		ML	
			Gude-MW13A		4				0-19" Reddish brown fine SANDY SILT, little cobbles. Dense, moist,
4-6	24/19		SO-4-6	7.4	5	5			moderately well sorted.
					5				
					6	6			
					6			ML	0-15" Reddish brown fine SANDY SILT, little cobbles. Dense, very moist,
6-8	24/15			1.2	7	7			moderately well sorted.
					5				
					5	8			
					4			ML	0-8" Reddish brown fine SANDY SILT, little cobbles. Dense, very moist,
8-10	24/17			6.7	4	9			moderately well sorted.
					3			SM	8-17" Moderate yellowish brown very fine SILTY SAND. Dense, wet,
					3	10			well sorted.
					3			ML	0-8" Reddish brown fine SANDY SILT, little cobbles. Dense, very moist,
10-12	24/17			3.3	3	11			moderately well sorted.
					2			ML	8-17" Pale yellowish brown very fine SANDY SILT. Slightly dense, wet,
					3	12			well sorted. Little dark organic staining.
					2			ML	0-8" Reddish brown fine SANDY SILT, little cobbles. Dense, very moist,
12-14	24/15			1.5	1	13			moderately well sorted.
					2			ML	8-15" Pale yellowish brown very fine SANDY SILT. Slightly dense, wet,
					2	14			well sorted. Little dark organic staining.
					2			ML	0-6" Reddish brown fine SANDY SILT, little cobbles. Dense, very moist,
14-16	24/20			3.0	2	15			moderately well sorted.
					1			ML	6-20" Pale yellowish brown very fine SANDY SILT. Slightly dense, wet,
					2	16			well sorted.
					2			ML	0-21" Pale yellowish brown very fine SANDY SILT. Loose, very wet,
16-18	24/24			1.6	4	17			well sorted.
					5			ML	21-24" Dusky brown very fine SILTY SAND. Dense, moist, well sorted.
					5	18			
					4				No Recovery. Soils very wet and loose.
18-20	24/0			--	2	19			
					5				
					5	20			

Logged by: Joseph Sawicki Date: 06/25/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No. MW-13A
Sampling Method:	Continuous Split Spoons	Sheet 2 of 2

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1007	1142
Reference				6/25/10	6/25/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					4			SM	0-9" Dusky brown very fine SILTY SAND. Moderately dense, wet,
20-22	24/20			2.1	5	21			well sorted.
					9			SP	9-20" Moderate yellowish brown very fine SAND, little silt. Very dense,
					10	22			moist, well sorted.
					7			SP	0-12" Dark brown very fine SAND, little silt. Extremely dense,
22-24	24/13			1.1	6	23			slightly moist, well sorted.
					7			SP	12-13" White very fine SAND, little silt and clay, trace medium to
					8	24			coarse sand. Slightly dense, moist, well sorted.
					7			SP	0-8" White very fine SAND, little silt and clay, trace medium to
24-26	24/15			1.3	5	25			coarse sand. Slightly dense, moist, well sorted.
					5			SP	8-12" Dark brown very fine SAND, little silt. Extremely dense,
					5	26			slightly moist, well sorted.
								SP	12-14" White very fine SAND, little silt and clay, trace medium to
						27			coarse sand. Slightly dense, moist, well sorted.
								SP	14-15" Dark brown very fine SAND, little silt. Extremely dense,
						28			slightly moist, well sorted.
									End of Boring - 26 feet
						29			
						30			
						31			
						32			
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			
						41			

Logged by: Joseph Sawicki Date: 06/25/2010

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger / Air Rotary	Boring No. MW-13B
Sampling Method:	Continuous Split Spoons	Sheet 1 of 3

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1324	1156
Reference				6/25/10	6/29/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					6			SM	0-12" Moderate yellowish brown fine SILTY SAND, trace coarse sand.
0-2	24/12			47	6	1			Dense, dry, well sorted.
					7				
					9	2			
					3			SM	0-10" Moderate yellowish brown fine SILTY SAND, trace coarse sand.
2-4	24/17		Gude-MW-13B SO-2-4	77	4	3			Dense, dry, well sorted.
					5			ML	10-17" Moderate brown SILT, little very fine sand. Slightly dense, dry,
					5	4			well sorted.
					4			SM	0-10" Moderate yellowish brown fine SILTY SAND, trace coarse sand.
4-6	24/20			24	5	5			Dense, dry, well sorted.
					7			SM	10-20" Moderate yellowish brown very fine SANDY SILT, trace coarse
					9	6			sand and gravel. Dense, moist, well sorted.
					4			SM	0-13" Moderate yellowish brown very fine SANDY SILT, trace coarse
6-8	24/13			16	5	7			sand and gravel. Dense, moist, well sorted.
					5				
					6	8			
					3			SM	0-12" Moderate yellowish brown very fine SANDY SILT, trace coarse
8-10	24/17			29	3	9			sand and gravel. Dense, moist, well sorted.
					3			SP	12-17" Moderate yellowish brown very fine SAND, some silt. Moderately
					3	10			dense, moist, well sorted.
					2			SM	0-7" Moderate yellowish brown very fine SANDY SILT, trace coarse
10-12	24/13			24	2	11			sand and gravel. Dense, moist, well sorted.
					3			SP	7-13" Moderate yellowish brown very fine SAND, some silt. Moderately
					4	12			dense, moist, well sorted.
					2			SP	0-12" Moderate yellowish brown very fine SAND, some silt. Moderately
12-14	24/13			26	2	13			dense, moist, well sorted.
					2			SM	12-13" White very fine SANDY SILT. Slightly dense, very moist, well
					2	14			sorted.
					2			SM	0-14" Moderate yellowish brown very fine SILTY SAND. Moderately
14-16	24/17			30	4	15			dense, wet, well sorted.
					2			SP	14-17" Dusky brown fine SAND, some silt, little coarse sand. Slightly
					5	16			dense, wet, well sorted.
					2			ML	0-13" Dusky brown SILT, some very fine sand. Slightly dense, wet, well
16-18	24/13			29	3	17			sorted. Little black/organic staining.
					5				
					6	18			
					3			ML	0-18" Dusky brown SILT, some very fine sand. Slightly dense, wet, well
18-20	24/18			25	4	19			sorted. Little black/organic staining.
					3				
					4	20			

Logged by: Joseph Sawicki Date: 6/25/10-6/29/10

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-13B
Sampling Method:		
	Continuous Split Spoons	Sheet 2 of 3
		Drilling

				Start	Finish
Water Level					
Time	-				
Date				1324	1156
Reference				6/25/10	6/29/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					6			ML	0-22" Dusky brown SILT, some very fine sand. Loose, wet
20-22	24/22			19	7	21			(very wet 0-6"), well sorted. Little black/organic staining.
					9				
					10	22			
					6			ML	0-18" Dusky brown SILT, little fine to coarse sand. Dense, wet,
22-24	24/18			24	9	23			moderately well sorted.
					15				
					18	24			
					4			ML	0-18" Dusky brown SILT, some fine sand. Moderately dense, wet,
24-26	24/18			19	9	25			moderately well sorted.
					10				
					12	26			
					9			SP	0-20" Dark brown (white 8-12") very fine SAND, some silt. Dense, moist,
26-28	24/20			27	14	27			well sorted.
					14				
					16	28		SP	
					4				0-13" Dark brown (white 11-13") very fine SAND, some silt. Dense, moist,
28-30	24/13			32	6	29			well sorted.
					6				
					7	30			
					7			SP	0-15" Dark brown and white very fine SAND, some silt. Dense, moist,
30-32	24/15			31	9	31			well sorted.
					9				
					10	32			
					9			SP	0-17" Dark brown and white very fine SAND, some silt. Dense
32-34	17/17			28	15	33			(very dense 10-17"), moist, well sorted.
					50\5				
						34			
									NO RECOVERY
34-36	24/0			--		35			
						36			
36-38	24/0			--		37			NO RECOVERY
						38			
					10			SM	0-10" Moderate yellowish brown fine SILTY SAND, trace coarse sand.
38-40	24/22			21	19	39			Slightly dense, wet, well sorted.
					38			SP	10-22" Moderate yellowish brown very fine SAND, little silt. Very dense,
					45	40			moist, well sorted.

Logged by: Joseph Sawicki Date: 6/25/10-6/29/10

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

EA Engineering, Science, and Technology, Inc.

LOG OF SOIL/ROCK BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Desc:

Job. No.	Client:	Location:
62196.08	Montgomery County DEP	Gude Landfill
Drilling Method:	Hollow Stem Auger	Boring No.
	Air Rotary	MW-13B
Sampling Method:		
	Continuous Split Spoons	Sheet 3 of 3

				Drilling	
Water Level				Start	Finish
Time	-				
Date				1324	1156
Reference				6/25/10	6/29/10

Sample Type	Inches Drvn/In. Recvrd	Dpth. Csg.	Sample No.	PID ppm	Blows per 6 in.	Depth in Feet		USCS Log	Surface Conditions: Topsoil
					10			SP	0-20" Moderate yellowish brown very fine SAND, little silt. Very dense,
40-42	24/20			11	15	41			moist, well sorted.
					23				
					21	42			
					23			SP	0-14" Moderate yellowish brown very fine SAND, little silt. Dense, moist,
42-44	17/24			16	44	43			well sorted.
					50/5			SM	14-24" Dark brown SILTY SAND and weathered bedrock. Dense,
						44			wet, poorly sorted.
					27			SM	0-16" Dark brown SILTY SAND and weathered bedrock, little clay.
44-46	23/16			12	34	45			Very dense, moist, poorly sorted.
					37				
					50/5	46			
					50/4			SM	0-14" Dark brown SILTY SAND and weathered bedrock. Extremely
46-48	4/4			18		47			dense, slightly moist, poorly sorted.
						48			Split Spoon Sampling Discontinued- 47 feet
						49			Rock
						50			
						60			
						70			
						80			
						90			
									End of Boring - 95 feet
						100			
						110			
						120			
						130			
						140			
						150			
						160			Note: Depth Scale Changes to 10 foot Intervals at 50 feet.

Logged by: Joseph Sawicki Date: 6/25/10-6/29/10

Drilling Contractor: Summit Site Services Driller: Chad Chism

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-1B	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville, MD
Well Grout Date	06/04/10	Developer Initials	BK/JS
Well Installation Date	06/04/10	Well Development Date	07/07/10
Gauge Date	07/07/10	Gauge Time	0930
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)	2'	Well Diameter	2"
Static Water Level	53'	Screen Length	20'
Development Time	90 mins.		
Surge Device	Pump 12v (SuperTwister ProActive)		
Weather	Sunny ≥ 95°F		

Well Volume Determination:

A. Well Depth	98.0'
B. Depth to Water	53.0'
C. Liquid Depth (A-B) (ft)	45.0'
D. Well Volume/ft	7.33 x 3 = 22 gallons
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	0940	1010	1040	1110		
Pump Rate (gpm)	1.10 gpm	1.10	1.10	1.10		
Volume purged (gal.)	10 gallons	30	50	70		
Turbidity (NTU)	474	328	67.6	8.6		
pH	5.76	5.63	5.90	5.75		
Temp. (°C)	18.28	18.29	17.47	17.82		

Total volume of water removed (gal): ≈ 70

Estimated Recharge Rate: _____

Depth to sediment before development: N/A Depth to ~~sediment~~ Hard Bottom after development: N/A

Total Surging Time: 30 mins

Development Description: MW-1A not installed

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation MW-2A
Condition Good / New
Well Grout Date
Well Installation Date
Gauge Date 07/08/10
Sounding Method water level indicator
Stick up/down (ft) 2' 1"
Static Water Level 61.27
• Development Time Pump 12v (Proactive Super Twister)
• Surge Device Switched 120 mins
Weather Sunny 90°F

Project Name Gude Landfill
Project Location Rockville, MD
Developer Initials BK
Well Development Date 07/08/10
Gauge Time 0850
Measurement Ref. top of PVC
Well Diameter 2"
Screen Length 20'

Well Volume Determination:

A. Well Depth 78.06
B. Depth to Water 61.38
C. Liquid Depth (A-B) (ft) 16.70
D. Well Volume/ft 2.72 x 3 = 8.2 gallons
E. Liquid screen length (ft) 20'

	Beginning	1	2	3	4	5
Surge Time (min)	0915	0930	0945	1000	1015	1045
Pump Rate (gpm)	0.25	0.25	0.25	≈0.25	≈0.25	≈0.25
Volume purged (gallons)	3.75	7.5	11.25	≈15.00	≈18.75	≈26.25
Turbidity (NTU)	>1000	118	827	43.5	23.9	6.96
pH	5.42	5.55	5.90	5.26	5.33	5.35
Temp. (°C)	18.87	18.61	18.80	19.00	19.36	19.51
DTW	65.50	66.20	NIR	65.72	65.88	

Total volume of water removed (gal): 20-25
Estimated Recharge Rate:
Depth to sediment before development: 78.06 Depth to ~~sediment~~ Hard Bottom after development: NIR
Total Surging Time: 25 mins

Development Description:

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-2B	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville, MD
Well Grout Date	06/17/10	Developer Initials	BK/JS
Well Installation Date	06/17/10	Well Development Date	07/07/10
Gauge Date	07/07/10	Gauge Time	1240
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)	33.25"	Well Diameter	2"
Static Water Level	60.18	Screen Length	20'
Development Time	120mins.		
Surge Device	Pump 12v (ProActive SuperTwister)		
Weather	Sunny ≥ 95°F		

Well Volume Determination:

A.	Well Depth	110.51
B.	Depth to Water	60.18
C.	Liquid Depth (A-B) (ft)	50.33
D.	Well Volume/ft	8.20 x 3 = 24.6 gallons
E.	Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1250	1330	1400	1430		
Pump Rate (gpm)	0.50	0.50	0.50	0.50		
Volume purged (gallons)	5	25	40	55		
Turbidity (NTU)	16.3	25.3	11.4	6.22		
pH	5.72	5.30	5.23	5.21		
Temp.(°C)	23.05	18.91	18.35	17.34		

Total volume of water removed (gal): 55

Estimated Recharge Rate: _____

Depth to sediment before development: 110.51 Depth to ~~sediment~~ Hard Bottom after development: 110.51

Total Surging Time: 30 mins.

Development Description: _____

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-3A (shallow)	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville, MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/08/10
Gauge Date	07/08/10	Gauge Time	1330
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)	24"	Well Diameter	2"
Static Water Level	9.84	Screen Length	20'
Development Time	90 mins		
Surge Device	Pump 12v (Proactive Super Twister)		
Weather	Sunny 95°		

Well Volume Determination:

A. Well Depth	25.63 / 25.63
B. Depth to Water	9.84
C. Liquid Depth (A-B) (ft)	15.79
D. Well Volume/ft	2.57 x 3 = 7.72 gallons
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1345	1350	1415	1430	1500	
Pump Rate (gpm)	2.5	≈1.15	1-2 gpm	1-2 gpm	1-2 gpm	
Volume purged gallons	17.5	23.25	≈35	55	65	
Turbidity (NTU)	>1000	>1000	718	840	147	
pH	5.68	5.31	5.33	5.30	5.31	
Temp. (°C)	15.40	15.80	15.85	15.92	15.95	
DTW	22.57	At pump intake	At pump Intake	At pump intake	At pump intake	

Total volume of water removed (gal): 65

Estimated Recharge Rate: _____

Depth to sediment before development: 25.63 Depth to ~~sediment~~ Hard Bottom after development: 25.63

Total Surging Time: 25 mins

Development Description: 1355-1400 pump stopped so well can recharge need be surged. DTW=15'

1415-1425 " " " DTW=17'

~~Stopped @ 1500 need to get to water disposal facility - Oaks Landfill~~

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-3B (Deep)	Project Name	Gude Landfill
Condition	Good / New	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/09/10
Gauge Date	07/09/10	Gauge Time	0840
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)		Well Diameter	2"
Static Water Level	8.63	Screen Length	20'
Development Time	15-20 mins		
Surge Device	Pump 12v (Proactive Super Twister)		
Weather	Sunny 95°		

Well Volume Determination:

A. Well Depth	96.75 // 97.02 (07/15/10)	Well Volume/ft = 11.81 × 3 = 35.43 (07/15/10)
B. Depth to Water	8.63 // 24.57 (07/15/10)	
C. Liquid Depth (A-B) (ft)	88.12 // 72.45 (07/15/10)	
D. Well Volume/ft	14.36 × 3 = 43.10	
E. Liquid screen length (ft)	20'	

	Beginning	1 07/09	2 07/15	3	4	5
Surge Time (min)	0900	0905	1145			
Pump Rate (gpm)	≈10	0.5	<0.25			
Volume purged	5-7	10	40			
Turbidity (NTU)	N/R	>1000	368			
pH	N/R	5.35	5.41			
Temp °C	N/R	16.64	18.14			

Total volume of water removed (gal): 10-12 gallons (07/09/10) 40 gallons (07/15/10)

Estimated Recharge Rate:

Depth to sediment before development: 96.75 Depth to ~~sediment~~ Hard Bottom after development: N/R

Total Surging Time: 10 mins

Development Description: Pump on @ 0853

Development stopped pump unable to lift water. DTW ≈ 65' (Pump @ 85').

07/15/10 Development Resumed using air lifting method. On @ 0915.

Distance to well from compressor approx. 180'. Air flowing but water not being produced. Height of trimmy pipe raised 6" and water produced.

On again @ 0950 flow very low compared to previous wells developed with air lifting

Pumping stopped @ 1145 well dry.

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-4	Project Name	Goode Landfill
Condition	Good/New	Project Location	Rockville, MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/15/10
Gauge Date	07/15/10	Gauge Time	1030
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)		Well Diameter	2"
Static Water Level	6.54	Screen Length	20'
Development Time	95mins		
Surge Device	Pump 12v (Proactive Super Twister)		
Weather	Sunny 90°		

Well Volume Determination:

A. Well Depth	27.88
B. Depth to Water	6.54
C. Liquid Depth (A-B) (ft)	21.34
D. Well Volume/ft	3.48 x 3 = 10.44
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1045	1145	1200	1205		
Pump Rate (gpm)	2.5	2.5	2.5	2.5		
Volume purged	25	~~+81~~ 175	212	225		
Turbidity (NTU)	>1000	41.4	17.1	8.24		
pH	N/R	6.15	6.13	6.11		
Temp. (°C)	N/R	14.71	14.64	14.62		

Total volume of water removed (gal): 225

Estimated Recharge Rate:

Depth to sediment before development: 27.88 Depth to ~~sediment~~ Hard Bottom after development: 28.53

Total Surging Time: 40mins

Development Description: Pump on @1035. Flow = 10L/min or 2.6 gpm
Silty well but clears up good.

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-6	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville, MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/08/10
Gauge Date	07/08/10	Gauge Time	1115
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)	28"	Well Diameter	2"
Static Water Level	16.21	Screen Length	20"
Development Time	120 mins		
Surge Device	Pump 12v (Private Super Twister)		
Weather	Sunny 95°		

Well Volume Determination:

A. Well Depth 25.81/27.44
B. Depth to Water 16.21
C. Liquid Depth (A-B) (ft) 9.60
D. Well Volume/ft 1.56 x 3 = 4.68
E. Liquid screen length (ft) 20'

	Beginning	1	2	3	4	5
Surge Time (min)	1130	1300	1320			
Pump Rate (gpm)	N/A	N/A	N/A			
Volume purged (gallons)	N/A (~~2.5~~)	≈10	≈15			
Turbidity (NTU)	>1000	>1000	>1000			
pH	7.30	5.66	5.54			
Temp.	23.95	19.82	18.91			
DTW	At pump intake	At pump Intake	At pump intake			

Total volume of water removed (gal): 15-18 gallons (x 18 gallons) Drum Opened and observed.
Estimated Recharge Rate: ∝163 mL/min
Depth to sediment before development: 25.81 Depth to ~~sediment~~ Hard Bottom after development: 27.44
Total Surging Time: 20 mins.

Development Description: 1130 - Well going dry during purge. Pumping stopped so well can recharge. Pumping Resumed when well shows recharge DTW = 16.51 purged to intake in 122 seconds (1204 → 1206)
Intake to 16.50' Recharge time = 1206 → 1241 (35 mins) Estimated Recharge = 163 mL/min (Average total recharge rate)

25.80
-16.50
09.30 = water column

9.3 x 0.163 = 1.5 gallons
1.5 gallons/35 minutes = 0.043 gpm
0.043 gal = 0.163 Liters = 163 mL/min

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-7	Project Name	Rockville MD, Gude Landfill
Condition	Good/New	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/13/10
Gauge Date	07/13/10	Gauge Time	1110
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)		Well Diameter	2"
Static Water Level	41.79	Screen Length	20'
Development Time	65mins		
Surge Device	Pump 12v (Proactive Super Twister)		
Weather	M/C, Rain Showers, 85°		

Well Volume Determination:

A. Well Depth	55.50
B. Depth to Water	41.79
C. Liquid Depth (A-B) (ft)	13.71
D. Well Volume/ft	2.23 x 3 = 6.70
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1135	1145	1200	1215		
Pump Rate (gpm)	1.17	1.3	1.3	1.3		
Volume purged (gallons)	18	30	50	70		
Turbidity (NTU)	>1000	17.7	12.8	8.6		
pH	5.75	5.51	5.62	5.59		
Temp (oC)	15.56	15.63	15.62	15.64		

Total volume of water removed (gal): 70

Estimated Recharge Rate: _____

Depth to sediment before development: 55.50 Depth to sediment after development: 55.50 (Hard Bottom)

Total Surging Time: 20mins

Development Description: Pump on @ 1120

4 mins

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-8	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/13/10
Gauge Date	07/13/10	Gauge Time	0840
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)		Well Diameter	2"
Static Water Level	22.94	Screen Length	20'
Development Time	110 mins		
Surge Device	Pump 12v (Proactive Super Twister)		
Weather	M/C, Rain showers, 80°		

Well Volume Determination:

A. Well Depth 32.49
B. Depth to Water 22.94
C. Liquid Depth (A-B) (ft) 9.55
D. Well Volume/ft 1.56 x 3 = 4.67 gallons
E. Liquid screen length (ft) 20'

	Beginning	1	2	3	4	5
Surge Time (min)	1010	1015	1030	1035	1045	
Pump Rate (gpm)	8L/min 2.1 gpm	2L/min 0.5 gpm	2L/min 0.5 gpm	2L/min 0.5 gpm	2L/min 0.5 gpm	
Volume purged (gallons)	20	30	37	40	45	
Turbidity (NTU)	>1000	453	30.4	16.5	7.48	
pH	5.81	5.30	5.34	5.44	5.40	
Temp. (°C)	15.55	17.11	17.28	17.04	17.12	
			DTW = 24.98		DTW = 25.11	

Total volume of water removed (gal): 45
Estimated Recharge Rate:
Depth to sediment before development: ~~22.94~~ BK 32.49 Depth to sediment after development: 32.49 (Hard Bottom)
Total Surging Time: 20 mins

Development Description: Pump on @ 0855 Well empty/pump ~~surging~~ BK pulsing @ 0901. 0905 pump stopped - well recharging. Recharged to 23' surged & Pumped dry. Recharged again to 23' surged & Pumped dry. Recharged again to 23' and pumped @ a sustainable rate. ~~1030 flow increased slightly~~ BK

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-9	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/09/10
Gauge Date	07/09/10	Gauge Time	1200
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)	Flush Mount	Well Diameter	2"
Static Water Level	18.21	Screen Length	20"
Development Time	70 mins		
Surge Device	Pump 12v		
Weather	Sunny 95°		

Well Volume Determination:

A. Well Depth	24.11
B. Depth to Water	18.21
C. Liquid Depth (A-B) (ft)	5.9
D. Well Volume/ft	0.96 x 3 = ~~2.89~~ gallons
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1210	1235	1250	1305	1310	
Pump Rate (gpm)	<1.0	<1.0	<1.0	<1.0	<1.0	
Volume purged	3 gal.	7	9	11	12	
Turbidity (NTU)	>1000	615	220	17.3	7.7	
pH	6.39	5.86	5.88	5.85	5.91	
Temp.	17.31	24.86 (Flow thru cell)	24.83	24.92	24.94	

Total volume of water removed (gal): 12

Estimated Recharge Rate: _____

Depth to sediment before development: 24.11 Depth to ~~sediment~~ after development: 24.11 (Hard Bottom)

Total Surging Time: 20 mins

Development Description:

Water level @ pump intake. Flow rate sporatic. Pump surging. Temp high due to flow thru cell (YSI) being in sun and sporatic flowrate.

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-10	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/12/10
Gauge Date	07/12/10	Gauge Time	1125
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)	F.M.	Well Diameter	2"
Static Water Level	7.55	Screen Length	20'
Development Time	120 mins		
Surge Device	Pump Rev (Proactive Superinvistor)		
Weather	Sunny 85°		

Well Volume Determination:

A. Well Depth	24.70
B. Depth to Water	7.55
C. Liquid Depth (A-B) (ft)	17.15
D. Well Volume/ft	2.80 x 3 = 8.40 gallons
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1140	1210	1225	1255	1300	1330
Pump Rate (gpm)	1.5L/min 0.4gal/min	1.5L/min 0.4gal/min	1.5L/min 0.4gal/min	0.5L/min 0.13gal/min	1.0L/min 0.26gal/min	1.0L/min 0.26gal/min
Volume purged	12	24-25	30	32	33	41
Turbidity (NTU)	>1000	>1000	>1000	631	287	45.9
pH	6.64	5.79	5.43	5.40	5.42	5.38
Temp. (°C)	16.97	15.29	15.16	15.17	15.22	15.26

Total volume of water removed (gal): 41 gallons

Estimated Recharge Rate: _____

Depth to sediment before development: 24.70 Depth to ~~sediment~~ Hard Bottom after development: 24.70

Total Surging Time: 20 mins

Development Description: Pump on @1128 - 1133 @ 2 gpm; 1133 → 1140 @ 1.5 L/min (or 0.4 gal/min)
1230 DTW @ pump intake - stopped to recharge. Restarted @ 1240 @ 0.5 L/min → DTW = 17'
1300 Flow increased to 1.0 L/min / 0.26 gal/min

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-11A	Project Name	Guide Landfill
Condition	Good/New	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/12/10
Gauge Date	07/12/10	Gauge Time	0845
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)	F.M.	Well Diameter	2"
Static Water Level	15.92	Screen Length	20'
Development Time	120 mins		
Surge Device	Pump 12v (Proactive Super Twister)		
Weather	Sunny 80°		

Well Volume Determination:

A. Well Depth 29.43
B. Depth to Water 15.92
C. Liquid Depth (A-B) (ft) 13.51
D. Well Volume/ft 2.20 x 3 = 6.61 gallons
E. Liquid screen length (ft) 20'

	Beginning	1	2	3	4	5
Surge Time (min)	0930	1005	1020	1040	1045	1100
Pump Rate (gpm)	1.0-1.5	0.75L/min	1.0L/min	1.0L/min	1.0L/min	1.0L/min
Volume purged (gal.)	9	17	25	30	31	35
Turbidity (NTU)	>1000	>1000	>1000	326	134	46.6
pH	5.11	5.17	5.18	5.20	5.22	5.18
Temp. (oC)	13.22	13.17	14.21	13.88	14.01	14.12

Total volume of water removed (gal): 35
Estimated Recharge Rate:
Depth to sediment before development: 29.43 Depth to ~~sediment~~ after development: 29.43 (Hard Bottom)
Total Surging Time: 25 mins

Development Description:
Pump on @ 0900 - Well surged 0850-0900. Well pumped for 7-10 mins before going dry. Approx 9 gallons removed. Pump stopped to recharge. Resumed when DTW=20' (15-20 mins.) Pump restarted @ 0930 - stopped @ 0938 (well needs recharge.) Approx 8 gallon removed. 0958 - Surging Resumed 1005 - Pump Restarted w/ Reduced flow (ball valve).

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-11B	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/14/10
Gauge Date	07/14/10	Gauge Time	1310
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)	F.M.	Well Diameter	2"
Static Water Level	17.13	Screen Length	20'
Development Time	100 mins		
Surge Device	Airlift/Pump12v		
Weather	Sunny 85°		

Well Volume Determination:

A. Well Depth 88.40
B. Depth to Water 17.13
C. Liquid Depth (A-B) (ft) 71.27
D. Well Volume/ft 11.62 x 3 = 34.85 gallons
E. Liquid screen length (ft) 20'

	Beginning	1	2	3	4	5
Surge Time (min)	1405	1420	1430	1450		
Pump Rate (gpm)	1.8	1.8	1.8	1.8		
Volume purged	128	137	173	209		
Turbidity (NTU)	>1000	243	178	3.3		
pH	5.64	5.22	5.37	5.36		
Temp (°C)	13.63	13.49	13.56	13.58		

Total volume of water removed (gal): 209
Estimated Recharge Rate:
Depth to sediment before development: 88.40 Depth to ~~sediment~~ Hard Bottom after development: 90.25
Total Surging Time: 25mins.

Development Description: Compressor on @1325. Drum (1st) full @1335. 2nd drum full @1347. Submersible pump on @1356 → off @1450

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FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-12	Project Name	Gude Land fill
Condition	Good / New	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/09/10
Gauge Date	07/09/10	Gauge Time	1315-1320
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)		Well Diameter	2"
Static Water Level	14.24	Screen Length	20'
Development Time	45 mins.		
Surge Device	Pump (Proactive Super Twister)		
Weather	Sunny 95°		

Well Volume Determination:

A. Well Depth	24.65
B. Depth to Water	14.24
C. Liquid Depth (A-B) (ft)	10.41
D. Well Volume/ft	1.70 x 3 = 5.10
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1330	1340	1350	1400		
Pump Rate (gpm)	0.75-1.0	0.75-1.0	0.75-1.0	0.75-1.0		
Volume purged	10	20	30	40		
Turbidity (NTU)	>1000	168	34	4.2		
pH	5.60	5.17	5.24	5.29		
Temp.	17.36	18.11 Flow Thru Cell	18.26 Flow Thru Cell	18.18 Flow Thru Cell		

Total volume of water removed (gal): 40

Estimated Recharge Rate:

Depth to sediment before development: 24.65 Depth to ~~sediment~~ well bottom after development: 24.65

Total Surging Time: 20 mins

Development Description: This well is a good producer.

5 gallon tally

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-13A	Project Name	Gude Landfill
Condition	Good/New	Project Location	Rockville, MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/16/10
Gauge Date	07/16/10	Gauge Time	0825
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)		Well Diameter	2"
Static Water Level	7.05	Screen Length	20'
Development Time	50 mins		
Surge Device	Pump 12v (Proactive Super Twister)		
Weather	Sunny 90°		

Well Volume Determination:

A. Well Depth 26.72
B. Depth to Water 7.05
C. Liquid Depth (A-B) (ft) 19.67
D. Well Volume/ft 3.21 x 3 = 9.63 gallons
E. Liquid screen length (ft) 20'

	Beginning	1	2	3	4	5
Surge Time (min)	0837	0850	0900	0910	0915	
Pump Rate (gpm)	2.5	2.5	2.5	2.5	2.5	
Volume purged	60	92	117	142	155	
Turbidity (NTU)	>1000	65.1	587	7.70	5.22	
pH	NIR	5.73	5.18	5.13	5.13	
Temp(°C)	NIR	12.95	12.97	12.96	12.97	

Total volume of water removed (gal): 155
Estimated Recharge Rate:
Depth to sediment before development: 26.72 Depth to ~~sediment~~ Hard Bottom after development: 26.88
Total Surging Time: 20 mins

Development Description: Pump on @ 0813.

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	MW-13B (Deep)	Project Name	Gude Landfill
Condition	New Good	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/15/10
Gauge Date	07/15/10	Gauge Time	1350
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)		Well Diameter	2"
Static Water Level	5.98	Screen Length	20'
Development Time	40 mins		
Surge Device	Air Lift & Surge Block		
Weather	Sunny 90°		

Well Volume Determination:

A. Well Depth 97.45
B. Depth to Water 5.98
C. Liquid Depth (A-B) (ft) 91.47
D. Well Volume/ft 14.91 x 3 = 44.73
E. Liquid screen length (ft) 20'

	Beginning	1	2	3	4	5
Surge Time (min)	1410	1425	1430			
Pump Rate (gpm)	12	12	12			
Volume purged	55	235	295			
Turbidity (NTU)	43.8	13.4	9.93			
pH	7.11	6.32	6.29			
Temp (°C)	13.24	12.71	12.73			

Total volume of water removed (gal): 295
Estimated Recharge Rate:
Depth to sediment before development: 97.45 Depth to ~~sediment~~ Hard Bottom after development: 97.45
Total Surging Time: 15 mins

Development Description: Compressor on @ 1405. First dwn full @ 1410. 2nd @ 1415.

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	OB02A	Project Name	Guide Landfill
Condition	Good/Existing	Project Location	Rockville MD
Well Grout Date		Developer Initials	BK
Well Installation Date		Well Development Date	07/12/10
Gauge Date	07/12/10	Gauge Time	1415
Sounding Method	water level indicator	Measurement Ref.	top of PVC
Stick up/down (ft)		Well Diameter	2"
Static Water Level	16.75	Screen Length	20'
Development Time	60 mins		
Surge Device	Pump 12v (Proactive Supertinistor)		
Weather	T-storms 85°		

Well Volume Determination:

A. Well Depth	78.92
B. Depth to Water	16.75
C. Liquid Depth (A-B) (ft)	62.17
D. Well Volume/ft	10.13 x 3 = 30.40 gallons
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1445	1500	1515			
Pump Rate (gpm)	2.0	2.0	2.0			
Volume purged (gallons)	20	50	80			
Turbidity (NTU)	17.1	2.38	1.86			
pH	6.48	6.44	6.18			
Temp (°C)	15.27	15.29	15.24			

Total volume of water removed (gal): 80

Estimated Recharge Rate:

Depth to sediment before development: 78.92 Depth to ~~sediment~~ Hard Bottom after development: 78.92

Total Surging Time: 20 mins.

Development Description: Pump on @ 1435 (Flowrate = 2.0 gallons/minute)

EA Engineering, Science, and Technology, Inc.

FIELD RECORD OF WELL DEVELOPMENT

Well Designation	OB03	Project Name	Gude Landfill
Condition	Good / ~~Existing~~	Project Location	Rockville MD
Well Grout Date		Developer Initials	BIS
Well Installation Date		Well Development Date	07/14/10
Gauge Date	07/14/10	Gauge Time	~~0930~~ 0930
Sounding Method	water level indicator	Measurement Ref.	top of PVC BR
Stick up/down (ft)		Well Diameter	2"
Static Water Level	22.79	Screen Length	
Development Time	130 mins		
Surge Device	Air lift & Pump 2x		
Weather	M/C, Rain Showers 80°		

Well Volume Determination:

A. Well Depth	135.26
B. Depth to Water	22.79
C. Liquid Depth (A-B) (ft)	112.47
D. Well Volume/ft	18.33 x 3 = 55.0 gallons
E. Liquid screen length (ft)	20'

	Beginning	1	2	3	4	5
Surge Time (min)	1120	1130	1140			
Pump Rate (gpm)	2	2	2			
Volume purged	175	195	215			
Turbidity (NTU)	506	85.7	5.7			
pH	6.97	5.67	5.66			
Temp (°C)	15.05	15.04	15.08			

Total volume of water removed (gal): 215

Estimated Recharge Rate:

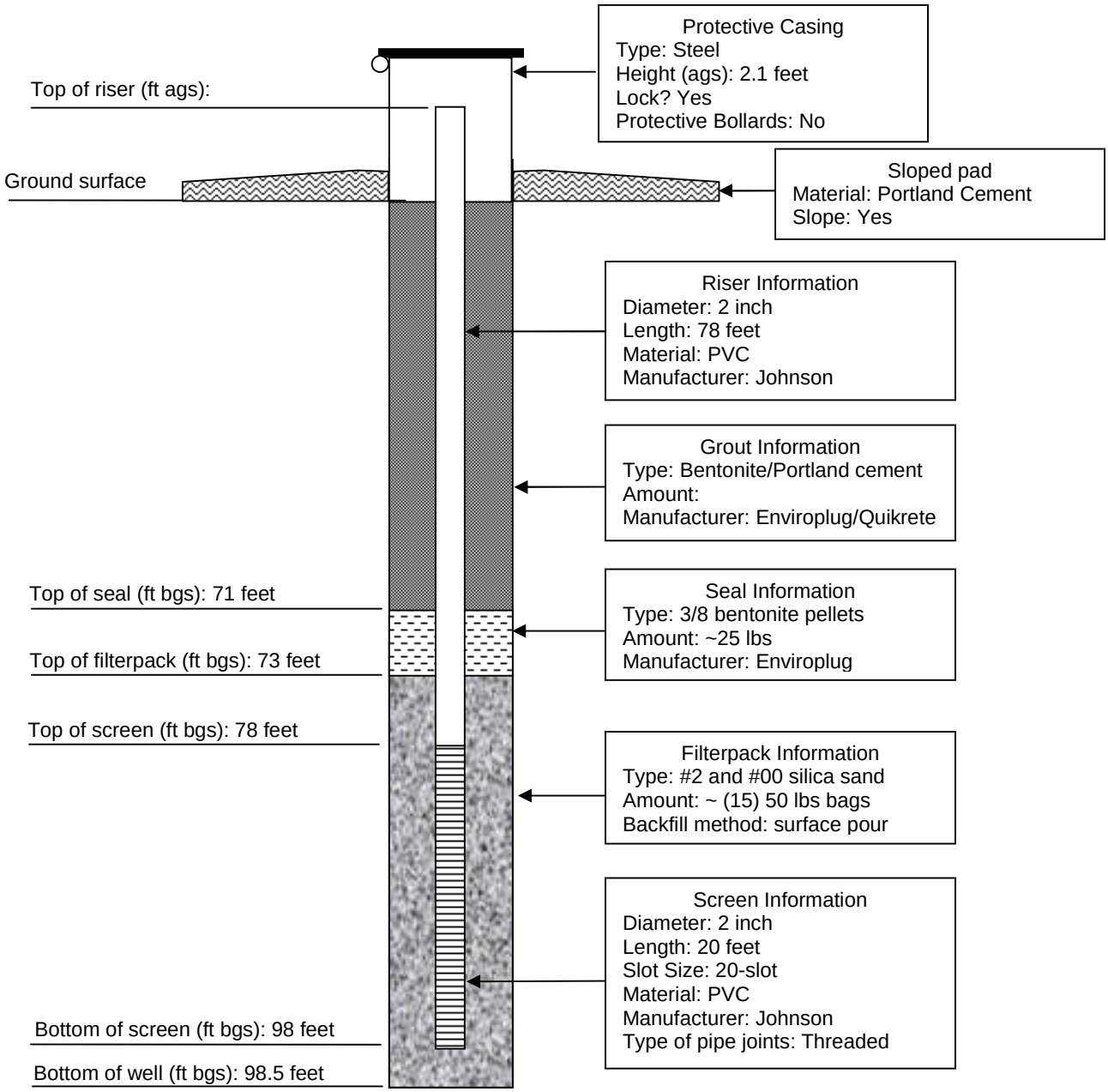
Depth to sediment before development: 135.26 Depth to ~~sediment~~ Bottom after development: 138.45

Total Surging Time: 30 mins

Development Description: Air on @ 1000
(OB03A DTB = 96.75) Air lifting & Submersible pump. being used to develop this well (Air lifting filled 1 drum in 8-10 mins, 55gal (At 55gal Turb = >1000 NTUs) 2nd drum filled in 12-14 mins 3rd drum filled in 12 mins. Switched to Submersible after 3rd drum filled up/air lifting. Air lifting 1000-1034. DTB after air lifting = 138.45' Submersible on @ 1115

RECORD OF MONITORING WELL CONSTRUCTION
(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-1
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/4/10 1230 Time Finished: 1440
Location: Rockville, MD	Depth to Water: 45 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA and Air Rotary

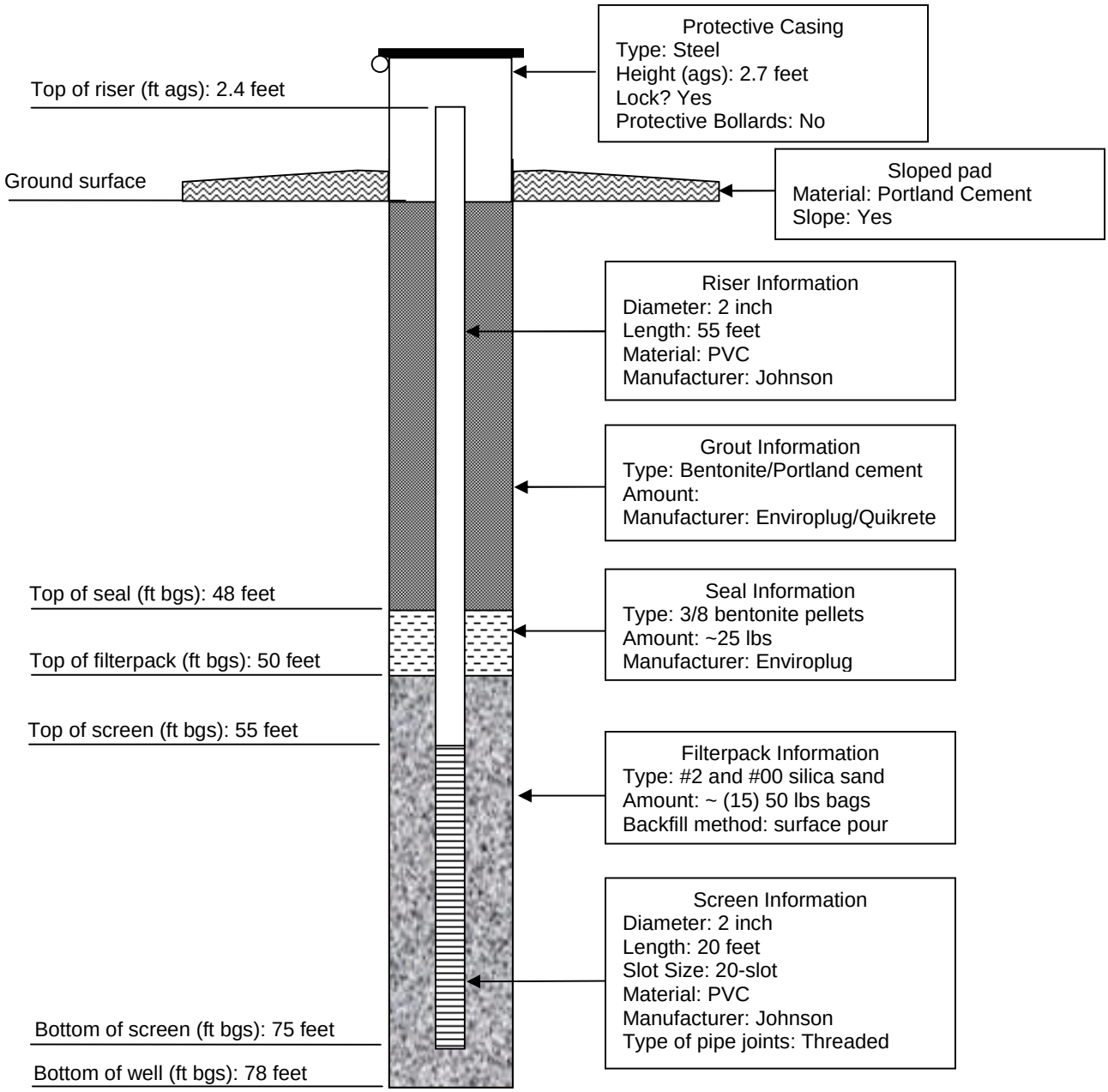


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-2A
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/9/10 1048 Time Finished: 1215
Location: Rockville, MD	Depth to Water: 63 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA and Air Rotary



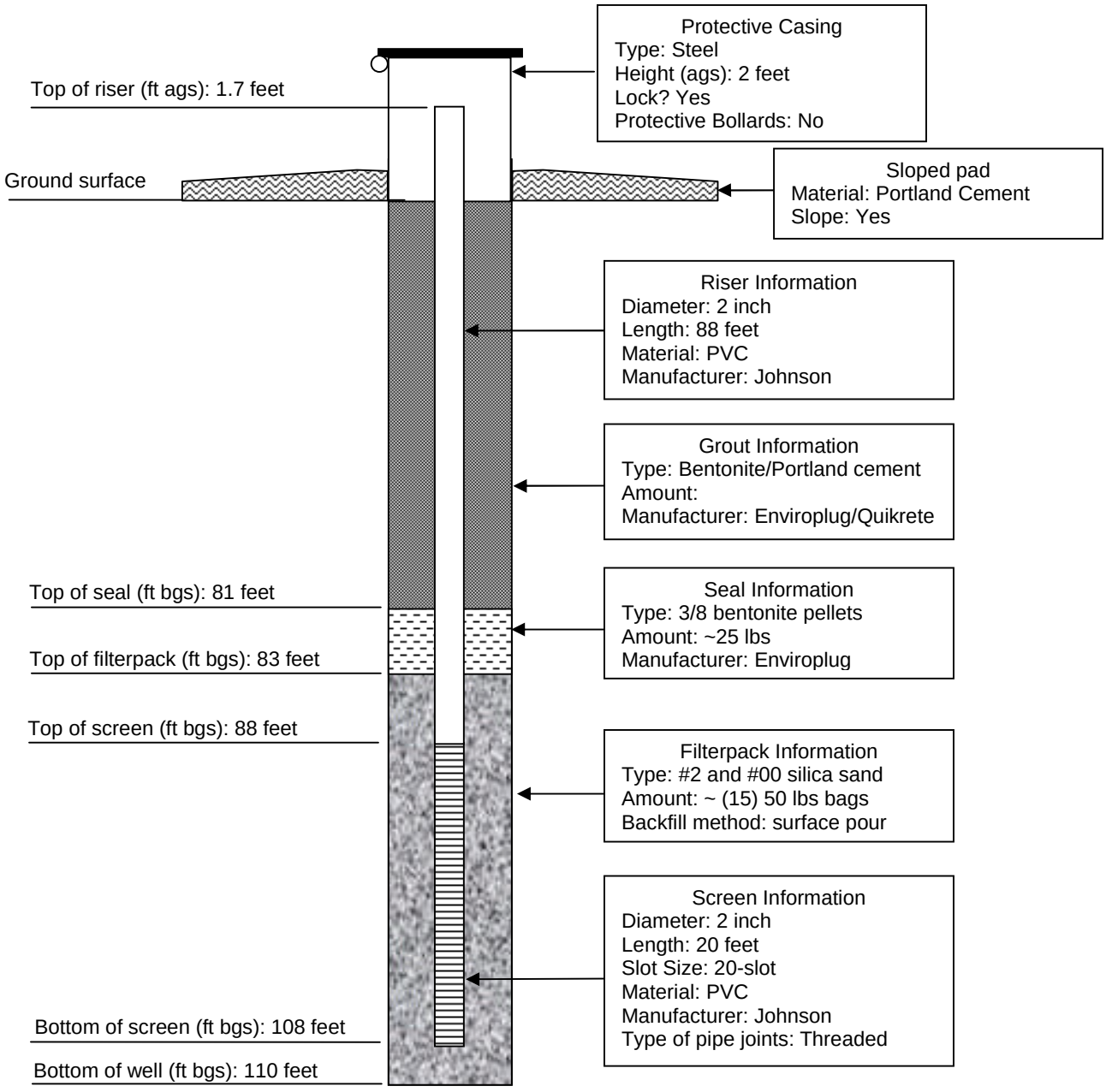
Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION

(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-2B
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/17/10 1118 Time Finished: 1302
Location: Rockville, MD	Depth to Water: 63 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA and Air Rotary



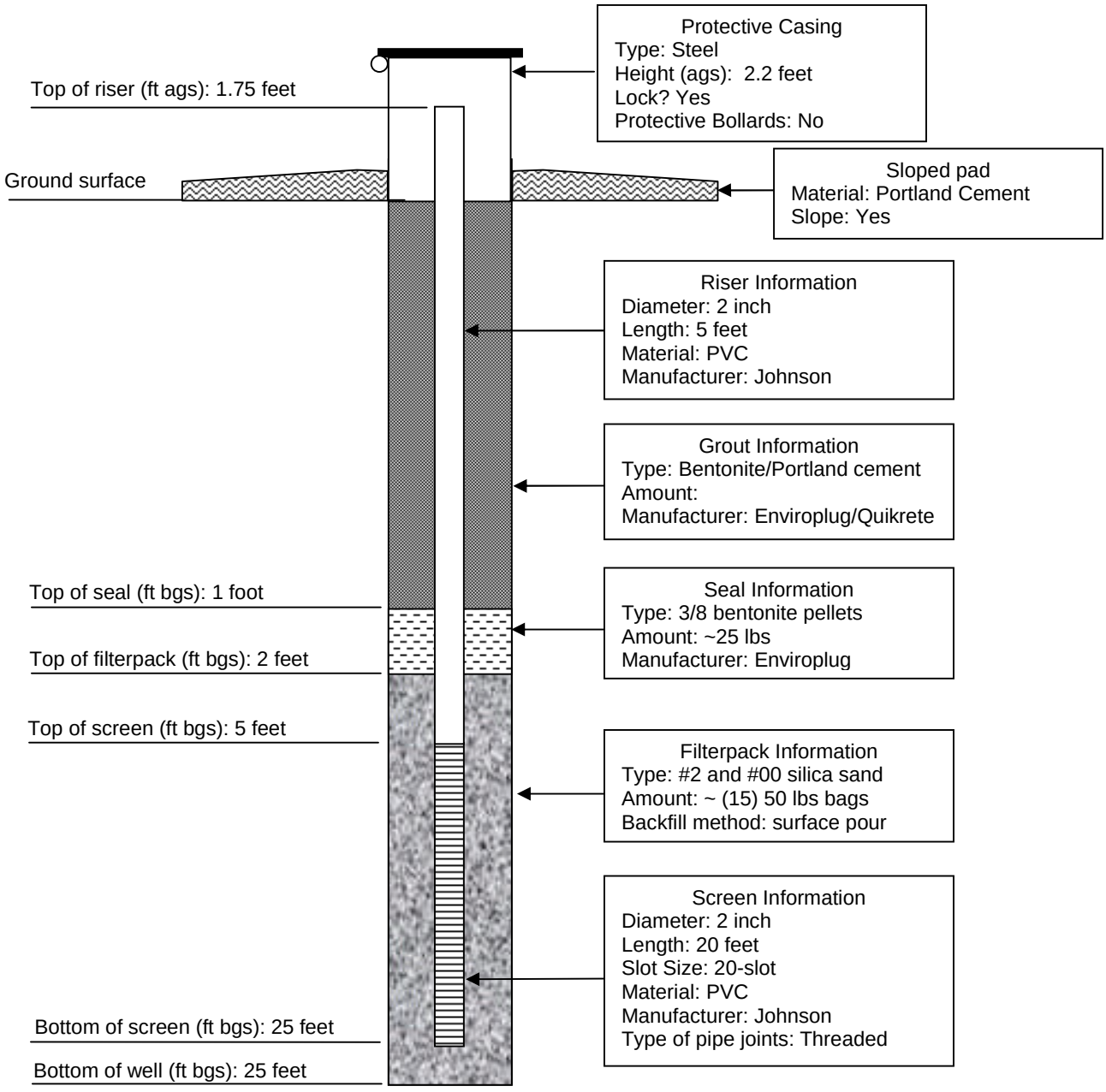
Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION

(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-3A
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/18/10 0945 Time Finished: 1025
Location: Rockville, MD	Depth to Water: 10 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA



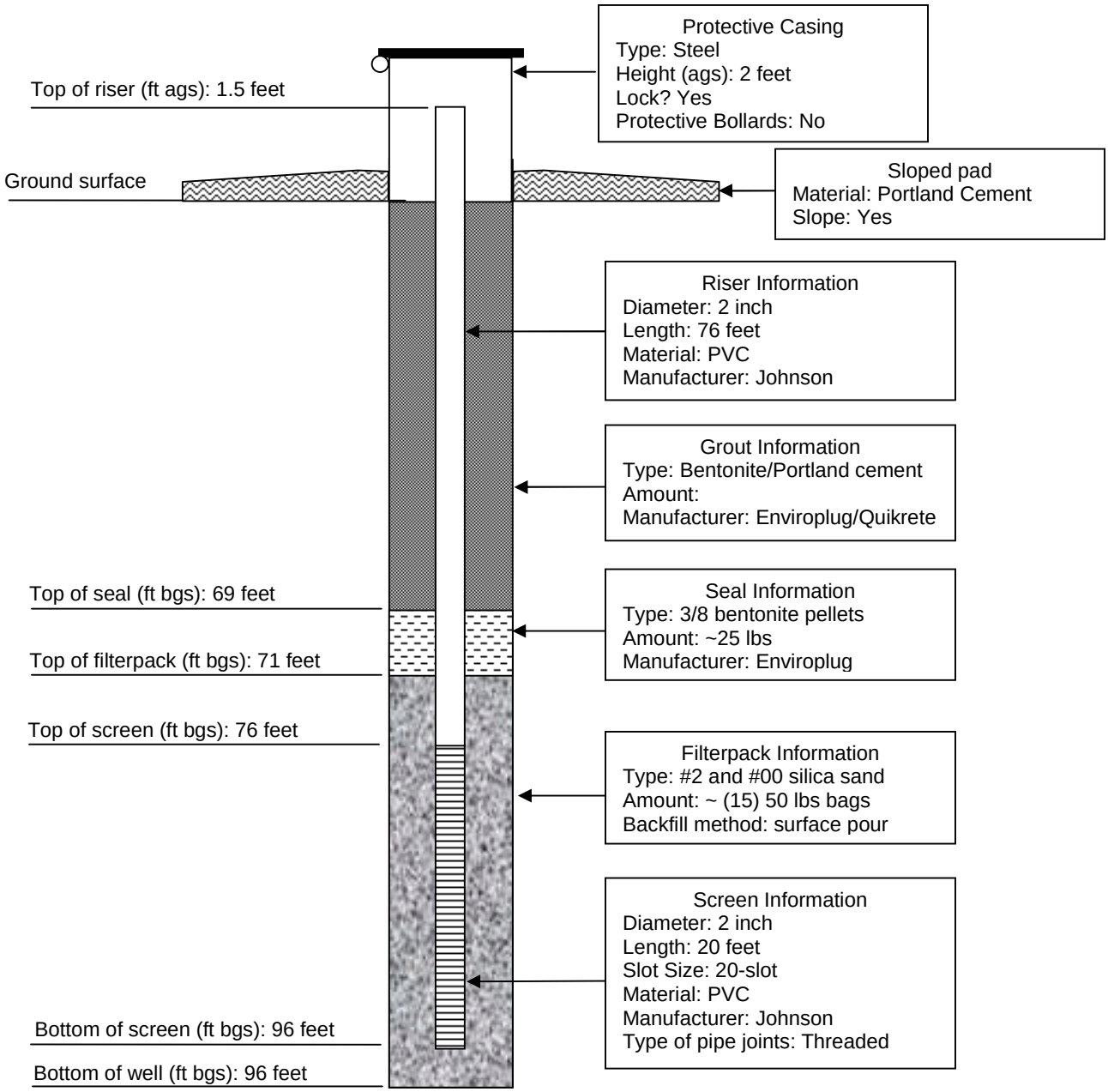
Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION

(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-3B
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/22/10 0745 Time Finished: 0847
Location: Rockville, MD	Depth to Water: 7.6 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA and Air Rotary

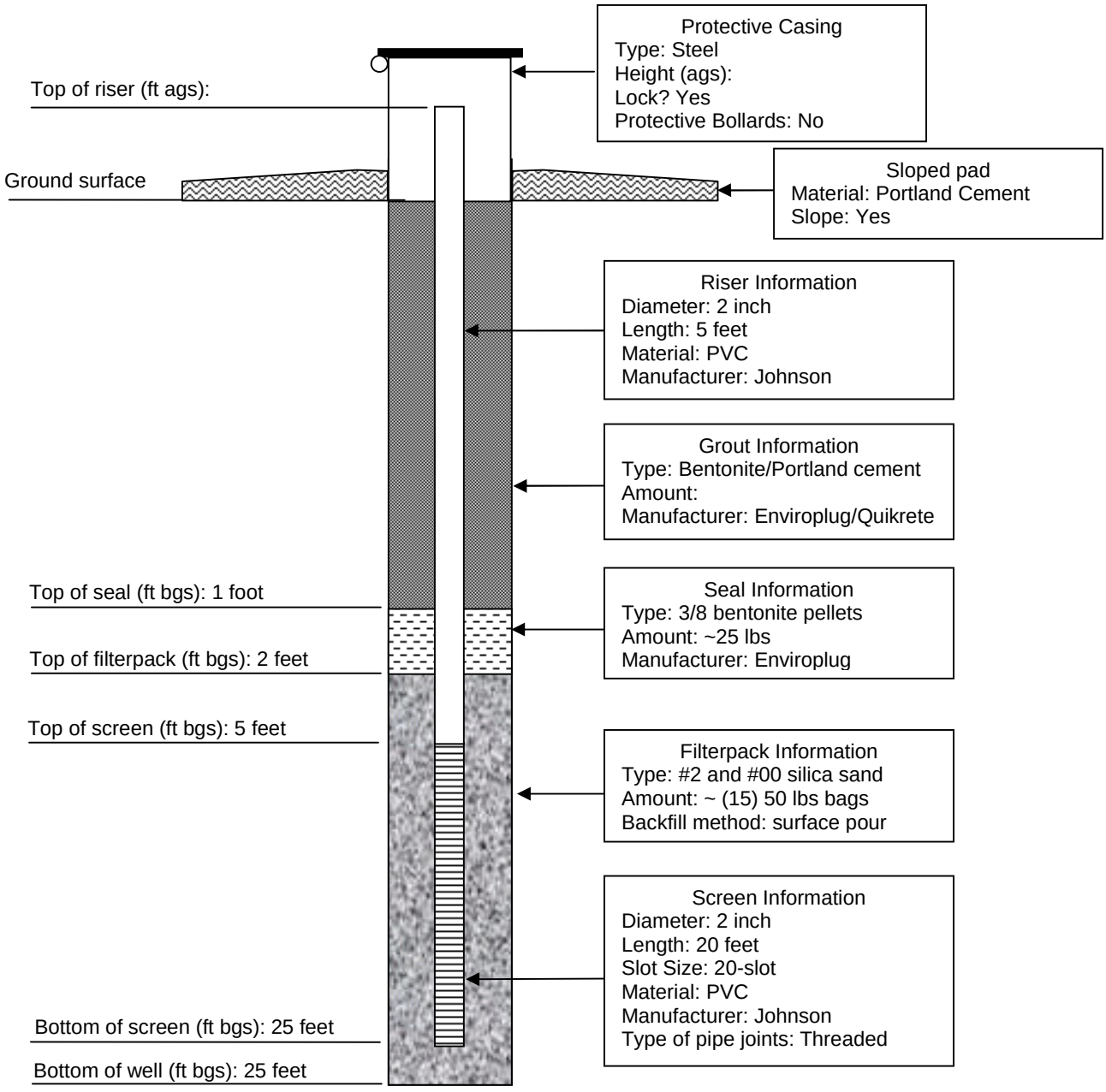


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-4
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 7/6/10 0920 Time Finished: 1000
Location: Rockville, MD	Depth to Water: 8 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA

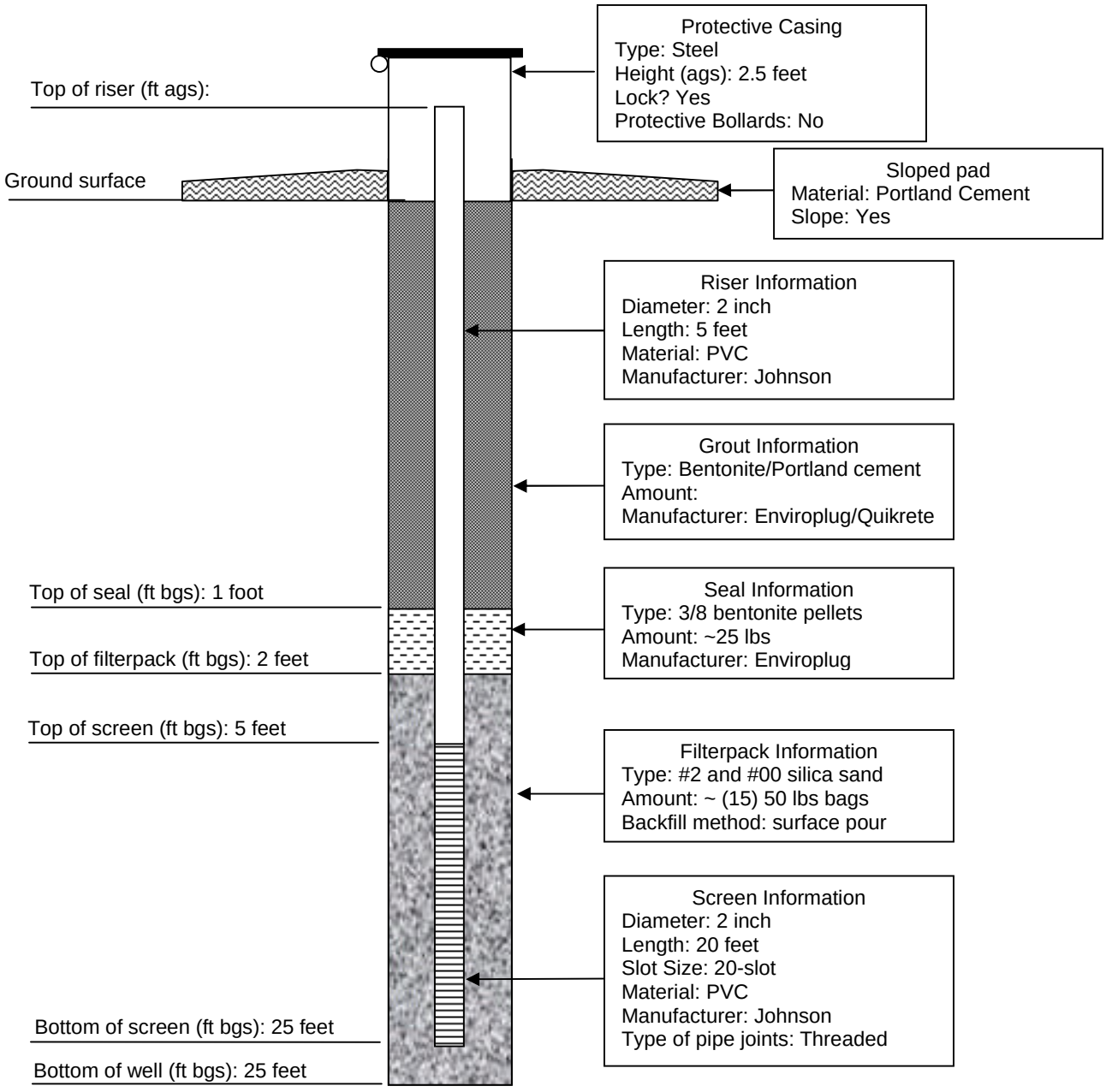


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-6
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/22/10 1125 Time Finished: 1345
Location: Rockville, MD	Depth to Water: 15 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA

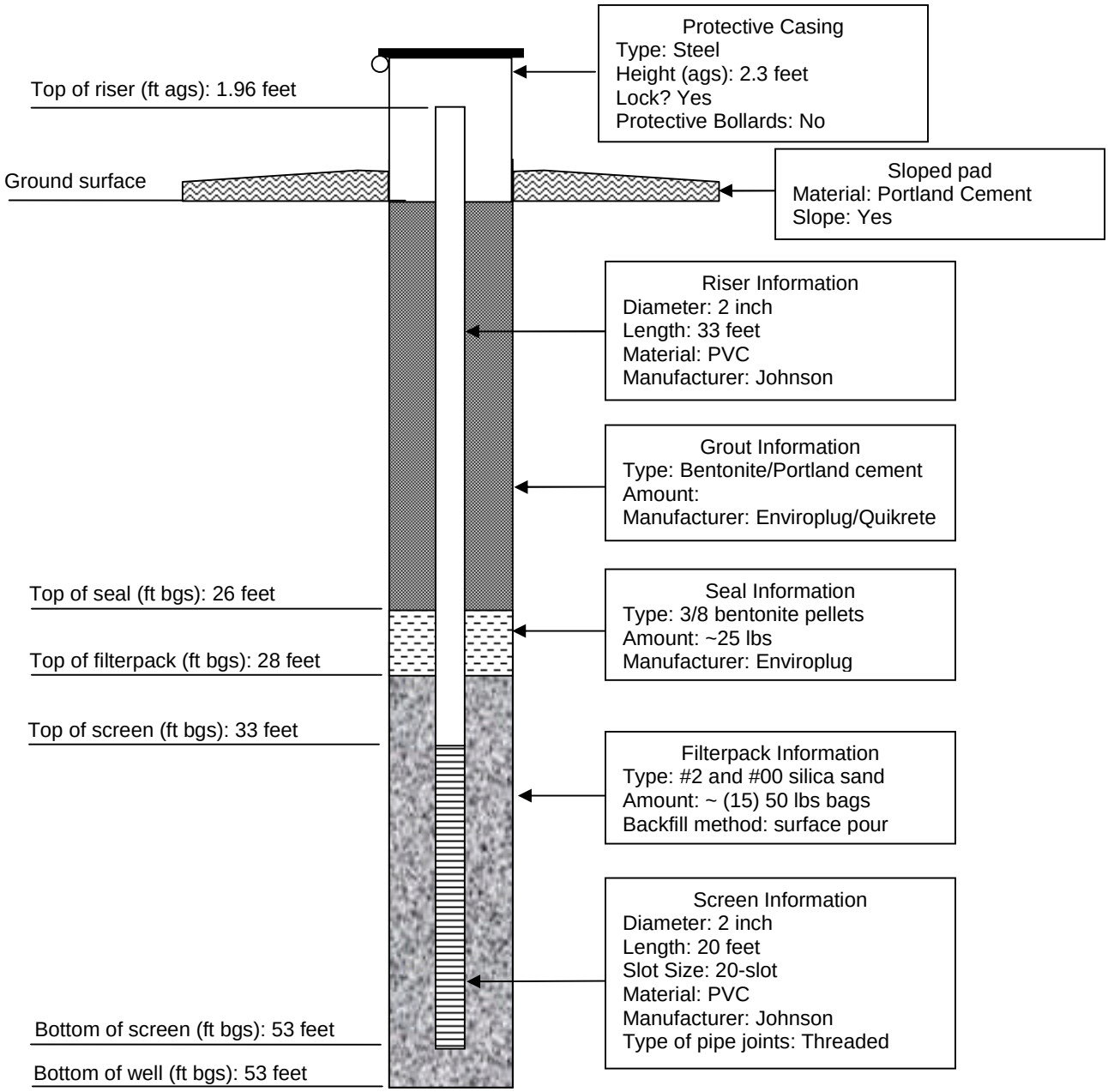


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-7
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/24/10 1339 Time Finished: 1430
Location: Rockville, MD	Depth to Water: 39.5 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA and Air Rotary

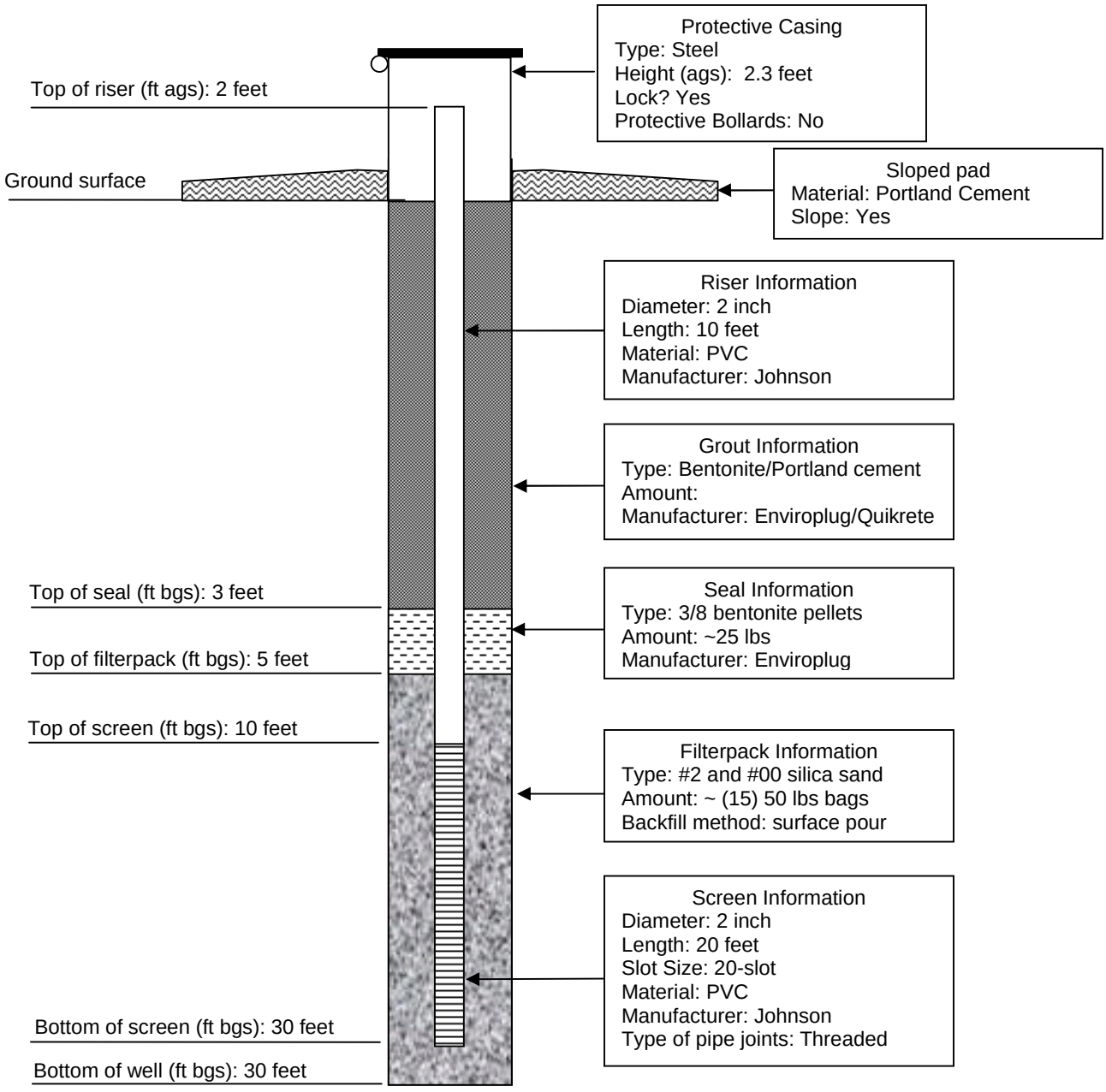


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-8
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/23/10 1032 Time Finished: 1100
Location: Rockville, MD	Depth to Water: 15 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA and Air Rotary

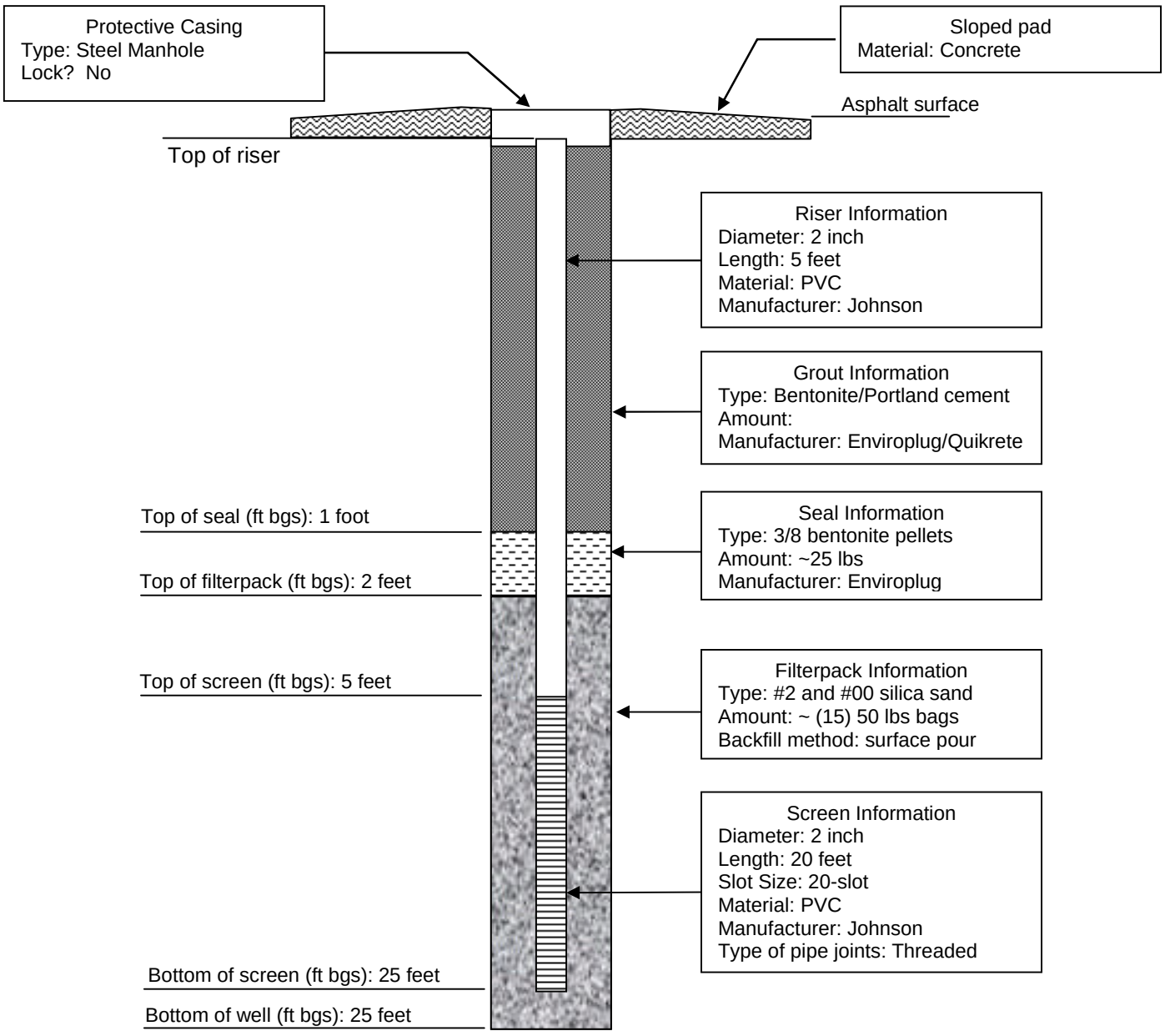


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(FLUSH MOUNT)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-9
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 7/6/10 1244 Time Finished: 1432
Location: Rockville, MD	Depth to Water: 20 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA

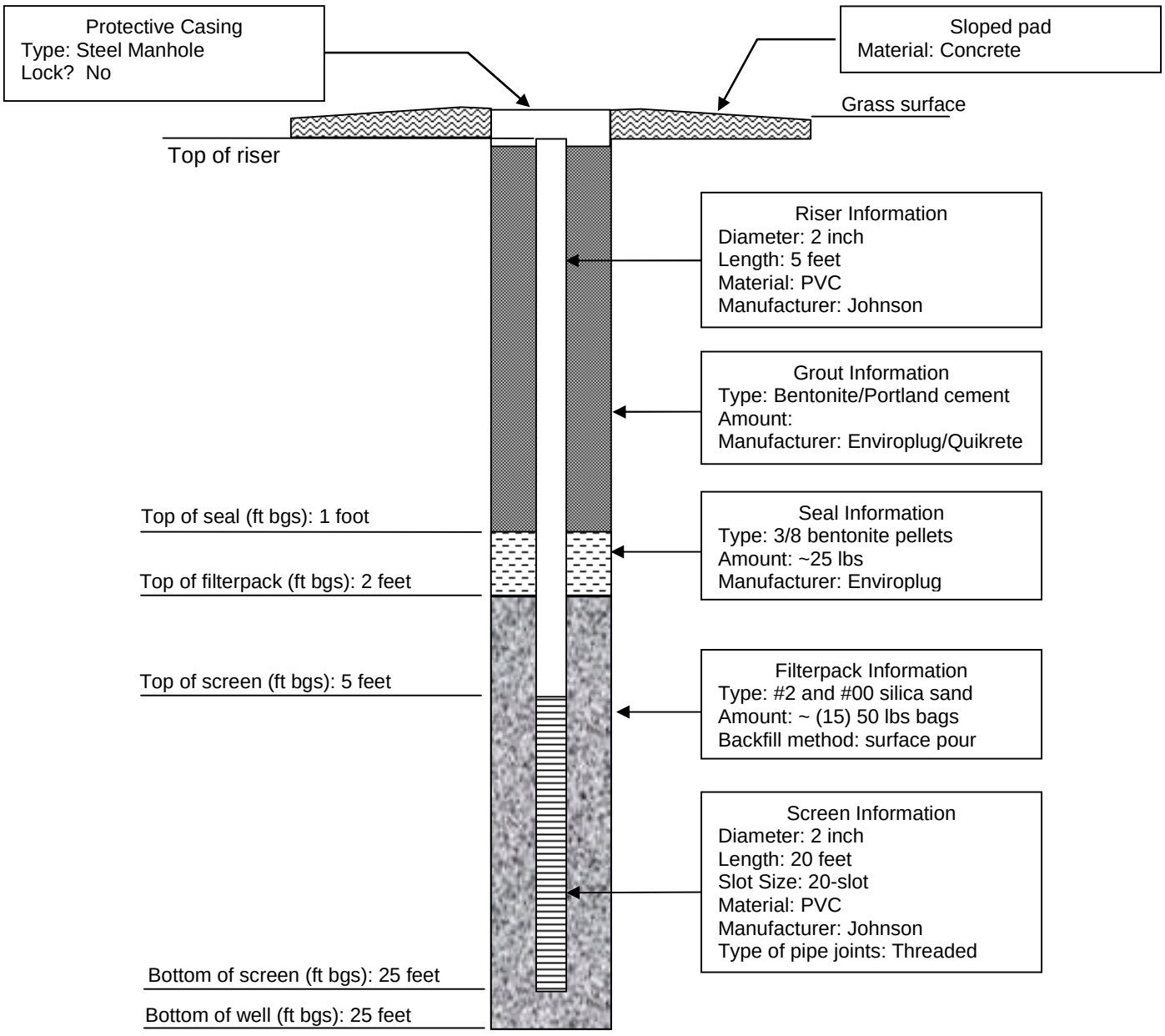


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(FLUSH MOUNT)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-10
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 7/2/10 1020 Time Finished: 1050
Location: Rockville, MD	Depth to Water: 8 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA



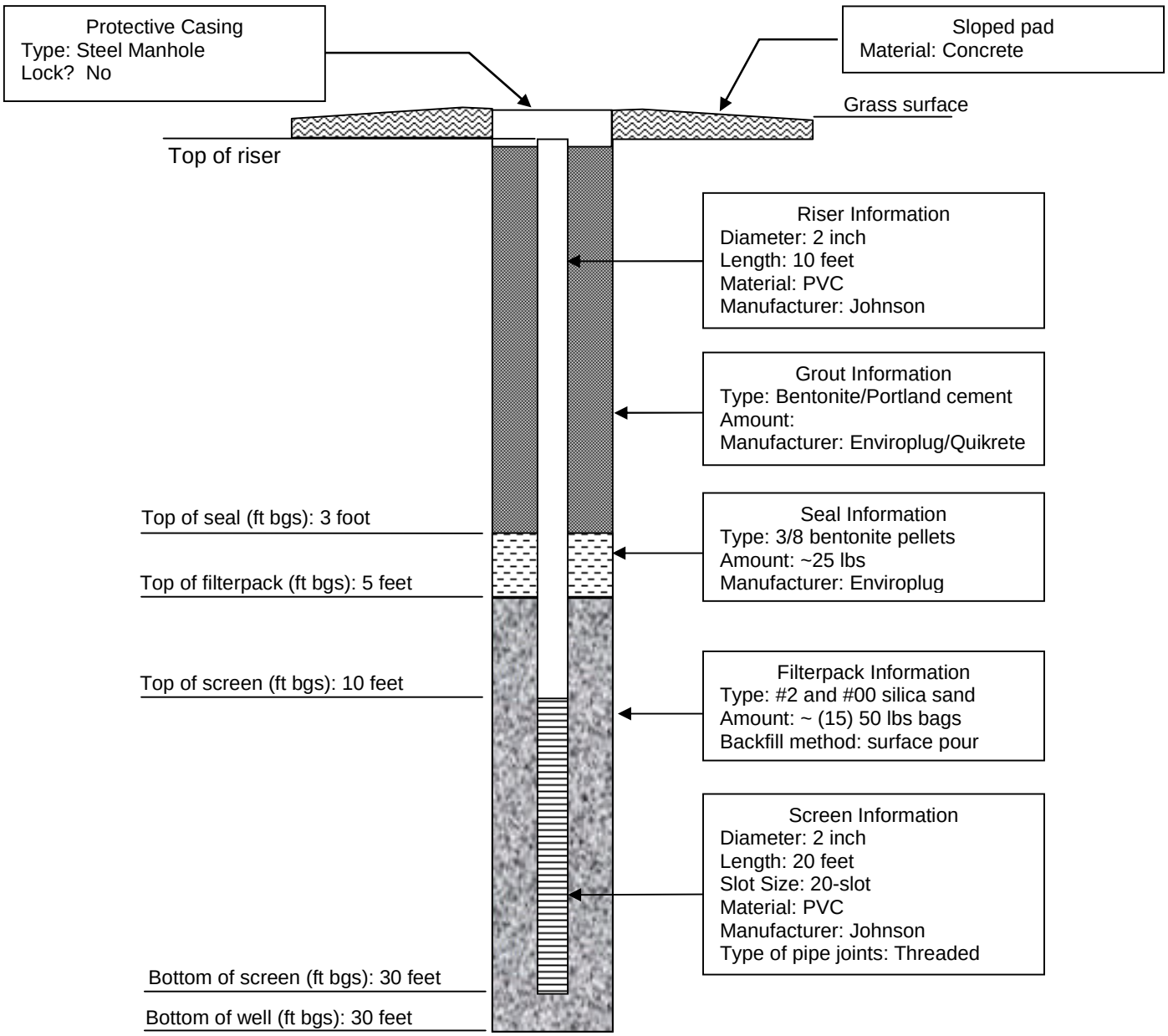
Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION

(FLUSH MOUNT)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-11A
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/30/10 0900 Time Finished: 1020
Location: Rockville, MD	Depth to Water: 15 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA



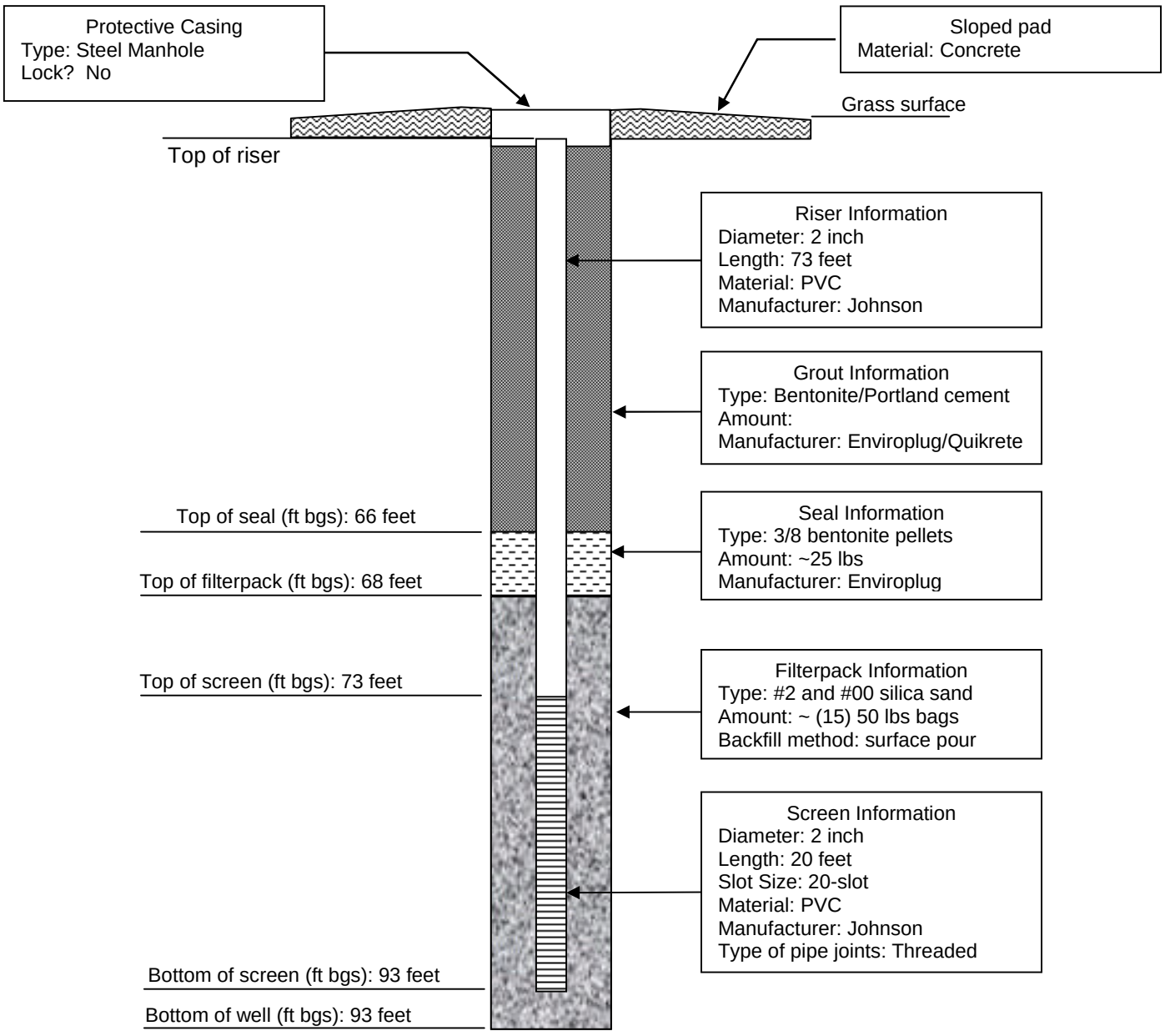
Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION

(FLUSH MOUNT)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-11B
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/30/10 1432 Time Finished: 1608
Location: Rockville, MD	Depth to Water: 17 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA and Air Rotary



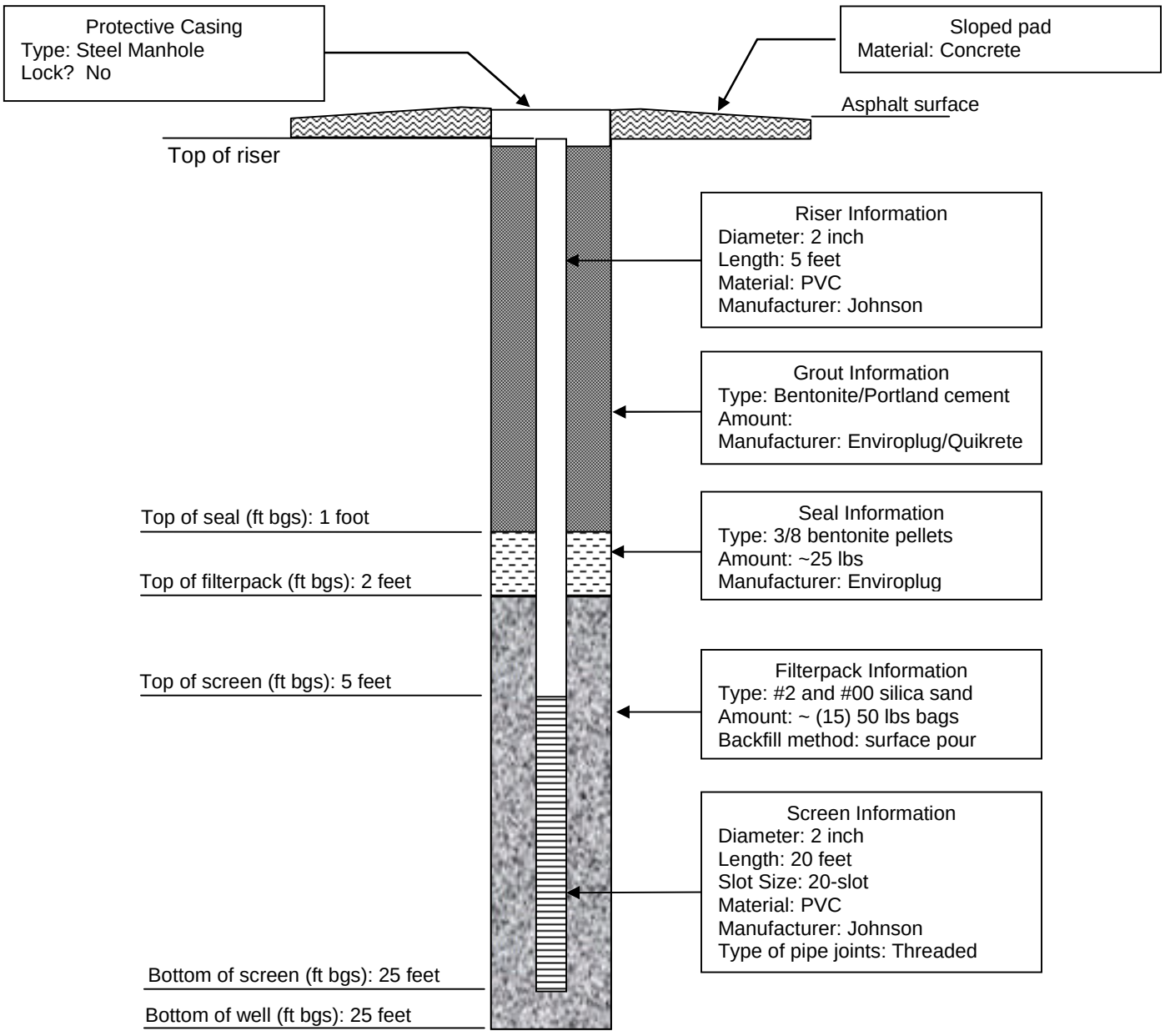
Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION

(FLUSH MOUNT)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-12
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 7/6/10 1205 Time Finished: 1227
Location: Rockville, MD	Depth to Water: 10 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA

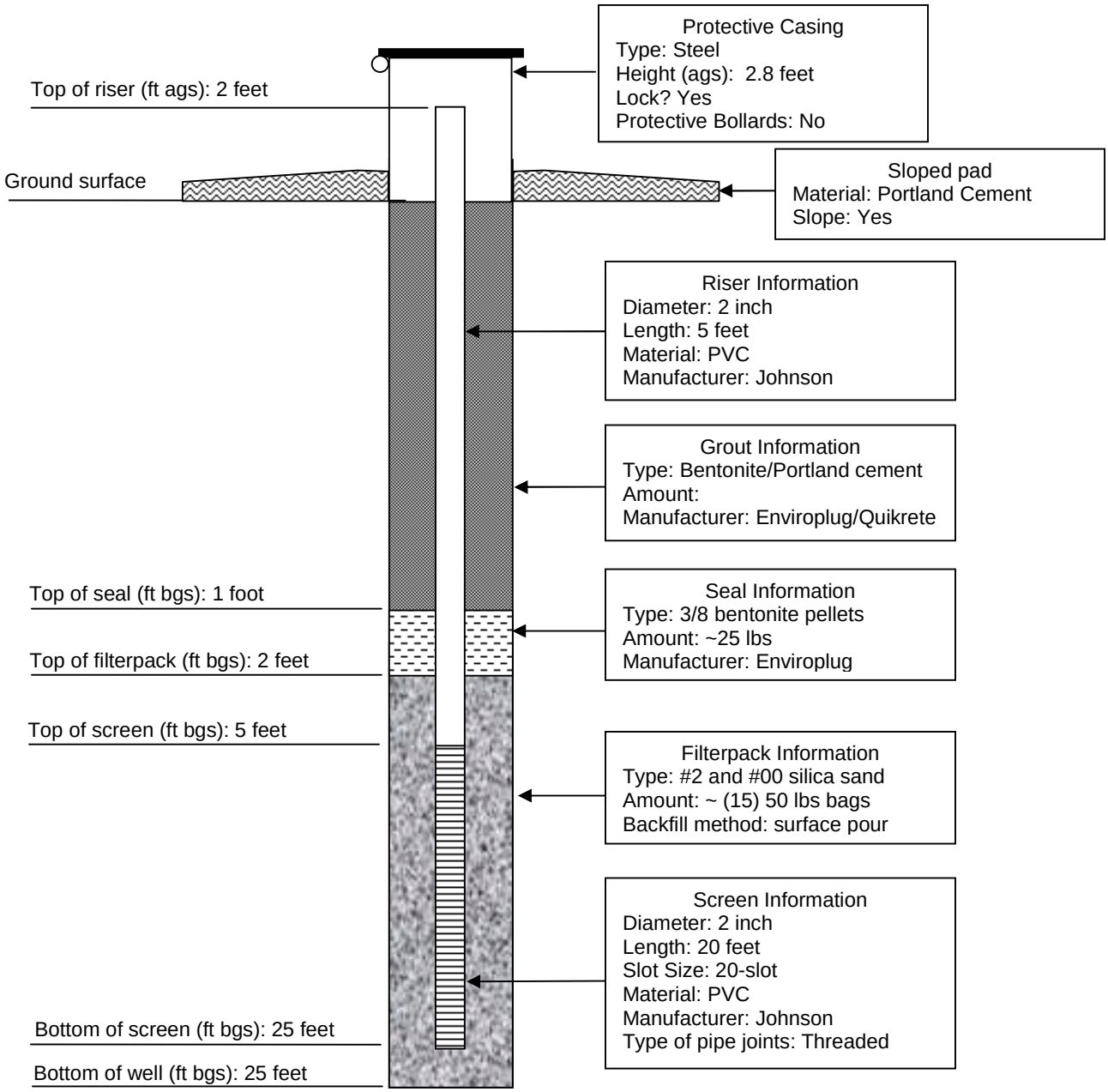


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-13A
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/25/10 1049 Time Finished: 1142
Location: Rockville, MD	Depth to Water: 5 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA

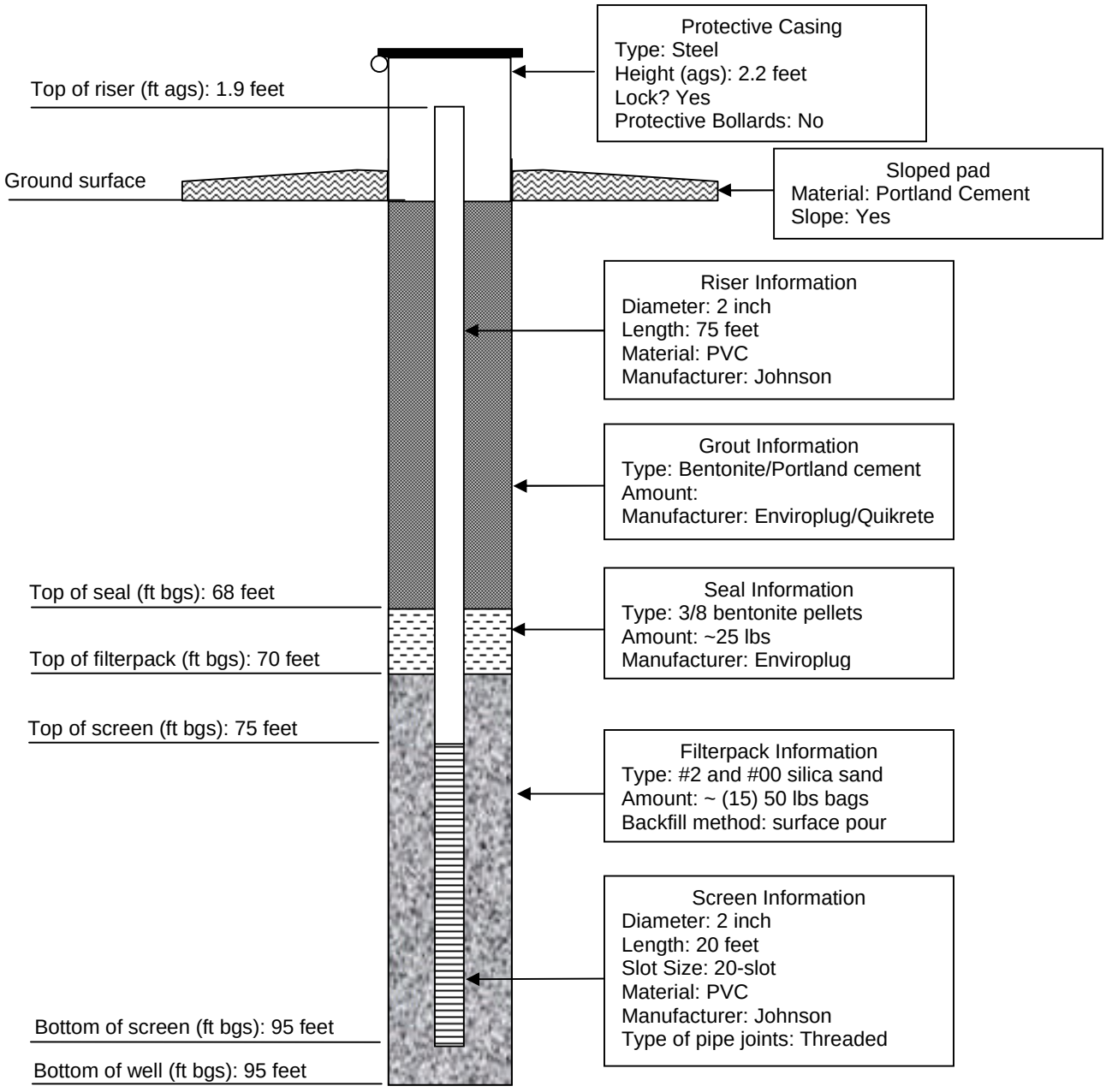


Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

RECORD OF MONITORING WELL CONSTRUCTION
(STICK-UP)

EA Engineering, Science, and Technology, Inc.	Monitoring Well/Soil Boring ID No.: MW-13B
Project Title/ Project No.: Gude Landfill 62196.08	Date/Time Installed: 6/29/10 1000 Time Finished: 1156
Location: Rockville, MD	Depth to Water: 7 feet bgs
Site Geologist: Joseph Sawicki	Drilling Method: HSA and Air Rotary



Note: All features not to scale

ags – Above Ground Surface
bgs – Below Ground Surface

C 1 3221
1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 53750

ST/CO USE ONLY
DATE Received MM DD YY
8 13

DATE WELL COMPLETED MM DD YY
15 20

Depth of Well
22 26
(TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" MO - 95 - 1145
28 29 30 31 32 33 34 35 36 37

OWNER Grade Brand Fill (last name) (first name)
STREET OR RFD 600 E. Grade Drive TOWN Rockville
SUBDIVISION ______ SECTION ______ LOT ______

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Well NOT used			

NUMBER OF UNSUCCESSFUL WELLS: ______

WELL HYDROFRACTURED yes Y no N

CIRCLE APPROPRIATE LETTER
- **A** A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- **E** ELECTRIC LOG OBTAINED
- **P** TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M __ D ______

DRILLERS SIGNATURE
(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: __ __ D ______

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y no N (44)
TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM (45 46) BENTONITE CLAY BC (45 46)
NO. OF BAGS ______ NO. OF POUNDS ______
GALLONS OF WATER ______
DEPTH OF GROUT SEAL (to nearest foot)
from ______ ft. to ______ ft.
48 TOP 52 54 BOTTOM 58
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
ST STEEL · CO CONCRETE · PL PLASTIC · OT OTHER

MAIN CASING TYPE (60 61) · Nominal diameter top (main) casing (nearest inch)! (63 64) · Total depth of main casing (nearest foot) (66 70)

EACH CASING — OTHER CASING (if used)
diameter inch · depth (feet) from · to

SCREEN RECORD
screen type or open hole insert appropriate code below
ST STEEL · BR BRASS BRONZE · HO OPEN HOLE · PL PLASTIC · OT OTHER

C 2
1 2
DEPTH (nearest ft.)
EACH SCREEN
1 — 8 9 · 11 15 · 17 21
2 — 23 24 · 26 30 · 32 36
3 — 38 39 · 41 45 · 47 51
SLOT SIZE 1 ______ 2 ______ 3 ______
DIAMETER OF SCREEN ______ (NEAREST INCH) 56 60

from to
GRAVEL PACK
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY
(NOT TO BE FILLED IN BY DRILLER)
T (70) TELESCOPE CASING · (E.R.O.S.) (72) LOG INDICATOR · W Q (74 75 76) OTHER DATA

C 3
1 2

PUMPING TEST
HOURS PUMPED (nearest hour) ______ 8 9
PUMPING RATE (gal. per min.) ______ 11 15
METHOD USED TO MEASURE PUMPING RATE ______
WATER LEVEL (distance from land surface)
BEFORE PUMPING ______ ft. 17 20
WHEN PUMPING ______ ft. 22 25
TYPE OF PUMP USED (for test)
A air · P piston · T turbine · C centrifugal · R rotary · O other (describe below) · J jet · S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. ___ 29
CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 35
PUMP HORSE POWER 37 41
PUMP COLUMN LENGTH (nearest ft.) 43 47
CASING HEIGHT (circle appropriate box and enter casing height)
+ above (49) LAND SURFACE
− below (49) (nearest foot) 50 51

LOCATION OF WELL ON LOT
N
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

DENV-CR00 OWNER

C 1 3222 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER: MO 537530

ST/CO USE ONLY DATE Received (MM DD YY) 8–13	DATE WELL COMPLETED (MM DD YY) 15–20	Depth of Well 22–26 (TO NEAREST FOOT)	PERMIT NO. FROM "PERMIT TO DRILL WELL" 28–37
	6 4 10	98	Mo-95-1146

OWNER: Gude Land Fill (last name / first name)
STREET OR RFD: 600 E. Gude Dr. TOWN: Rockville MD
SUBDIVISION: ______ SECTION: ______ LOT: ______

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown Dry F S & S	0	40	
Rock	40	98	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes Y / no **N** (circled)

CIRCLE APPROPRIATE LETTER
- **A** A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- **E** ELECTRIC LOG OBTAINED
- **P** TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M 6D 063
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. J6D 966
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): **Y** (circled) yes / N no (44)

TYPE OF GROUTING MATERIAL (Circle one): CEMENT **CM** (circled) (45 46) BENTONITE CLAY BC (45 46)

NO. OF BAGS: 6 NO. OF POUNDS: 560
GALLONS OF WATER: 42
DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. (TOP 48–52) to 20 ft. (BOTTOM 54–58)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below: ST STEEL; CO CONCRETE; **PL** PLASTIC (circled); OT OTHER

MAIN CASING TYPE (60 61)	Nominal diameter top (main) casing (nearest inch)! (63 64)	Total depth of main casing (nearest foot) (66–70)
PL	2	78

OTHER CASING (if used): diameter inch / depth (feet) from / to — (crossed out, blank)

SCREEN RECORD
screen type or open hole insert appropriate code below: ST STEEL; BR BRASS BRONZE; HO OPEN HOLE; **PL** PLASTIC (circled); OT OTHER

C 2

DEPTH (nearest ft.)

EACH SCREEN	Type (8 9)	from (11–15)	to (17–21)
1	PL	78	98
2			
3			

SLOT SIZE 1 .020 2 .2 3 .0
DIAMETER OF SCREEN: 2 (NEAREST INCH) (56–60)

GRAVEL PACK from 20 to 98
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

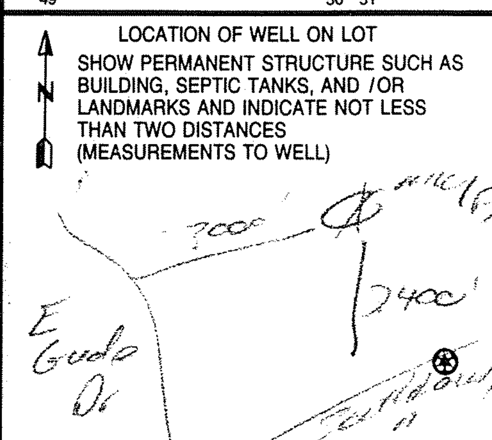
MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (70) TELESCOPE CASING; (E.R.O.S.) (72) LOG INDICATOR; W Q (74 75 76) OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) ____ (8 9)
PUMPING RATE (gal. per min.) ____ (11–15)
METHOD USED TO MEASURE PUMPING RATE ____
WATER LEVEL (distance from land surface)
BEFORE PUMPING ____ ft. (17–20)
WHEN PUMPING ____ ft. (22–25)
TYPE OF PUMP USED (for test): A air; P piston; T turbine; C centrifugal; R rotary; O other (describe below); J jet; S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. ____
CAPACITY: GALLONS PER MINUTE (to nearest gallon) ____ (31–35)
PUMP HORSE POWER ____ (37–41)
PUMP COLUMN LENGTH (nearest ft.) ____ (43–47)
CASING HEIGHT (circle appropriate box and enter casing height): **+** above (circled) / − below LAND SURFACE: +2 (nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



DENV-CR00 OWNER

C 1 3219 — SEQUENCE NO. (MDE USE ONLY)

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 58 7530

ST/CO USE ONLY
DATE Received MM DD YY

DATE WELL COMPLETED: MM 6 DD 9 YY 10

Depth of Well 75 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": MO-95-1137

OWNER Grade Landfill (last name) (first name)

STREET OR RFD 600 E Grade Drive TOWN Rockville MD

SUBDIVISION _____ SECTION _____ LOT _____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
brown silty fine sand	0	35	
weathered rock	35	75	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes [Y] no [N]

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M 6 D 063

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 76 D 0646

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes [Y] no [N]

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [CM] BENTONITE CLAY [BC]

NO. OF BAGS 6 NO. OF POUNDS 600

GALLONS OF WATER 72

DEPTH OF GROUT SEAL (to nearest foot)

from 0 ft. (TOP) to 49 ft. (BOTTOM)

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below: [ST] STEEL, [CO] CONCRETE, [PL] PLASTIC, [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL	2	55

OTHER CASING (if used) — EACH CASING

diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole insert appropriate code below: [ST] STEEL, [BR] BRASS, BRONZE, [PL] PLASTIC, [HO] OPEN HOLE, [OT] OTHER

C 2

DEPTH (nearest ft.) — EACH SCREEN

1	PL	55	75
2			
3			

SLOT SIZE 1 0 2 2 3 0

DIAMETER OF SCREEN .2 (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

from	to
50	75

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T ____ (E.R.O.S.) ____ W Q ____

TELESCOPE CASING ____ LOG INDICATOR ____ OTHER DATA ____

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) ____

PUMPING RATE (gal. per min.) ____

METHOD USED TO MEASURE PUMPING RATE ____

WATER LEVEL (distance from land surface)

BEFORE PUMPING ____ ft.

WHEN PUMPING ____ ft.

TYPE OF PUMP USED (for test)
- [A] air
- [P] piston
- [T] turbine
- [C] centrifugal
- [R] rotary
- [O] other (describe below)
- [J] jet
- [S] submersible

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. ____

CAPACITY: GALLONS PER MINUTE (to nearest gallon) ____

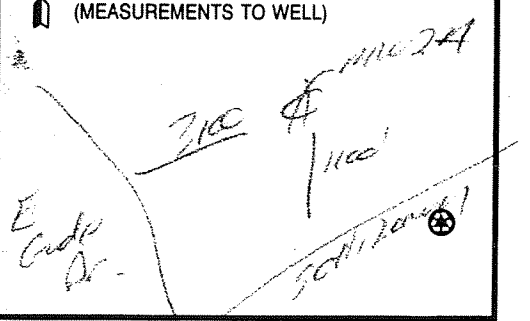
PUMP HORSE POWER ____

PUMP COLUMN LENGTH (nearest ft.) ____

CASING HEIGHT (circle appropriate box and enter casing height)
- [+] above LAND SURFACE
- [–] below

+2 (nearest foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



C 1 3220 — SEQUENCE NO. (MDE USE ONLY)

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537530

ST/CO USE ONLY
DATE Received MM DD YY

DATE WELL COMPLETED: MM 6 DD 17 YY 2010

Depth of Well: 108 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": MW-95-1139

OWNER Grade Land Fill
STREET OR RFD 600 E. Gude Drive TOWN Rockville
SUBDIVISION ____ SECTION ____ LOT ____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown dry sand silt	0	35	
weathered rock	35	69	
Hard rock	69	109	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes [Y] no [N]

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M D 263
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: I D 0606

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes [Y] no [N]

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT [C M] BENTONITE CLAY [B C]

NO. OF BAGS 4 NO. OF POUNDS 200
GALLONS OF WATER 84
DEPTH OF GROUT SEAL (to nearest foot)
from 0 ft. (TOP) to 80 ft. (BOTTOM)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below:
[S T] STEEL [C O] CONCRETE [P L] PLASTIC [O T] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
P2	2	89

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below:
[S T] STEEL [B R] BRASS BRONZE [H O] OPEN HOLE [P L] PLASTIC [O T] OTHER

C 2 — DEPTH (nearest ft.)

EACH SCREEN		from	to
1	P2	89	109
2			
3			

SLOT SIZE 1 0 2 2 3 0

DIAMETER OF SCREEN 2 (NEAREST INCH)

	from	to
GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68	84	109

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (E.R.O.S.) W Q

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour)
PUMPING RATE (gal. per min.)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING ft.
WHEN PUMPING ft.

TYPE OF PUMP USED (for test)
- [A] air
- [P] piston
- [T] turbine
- [C] centrifugal
- [R] rotary
- [O] other (describe below)
- [J] jet
- [S] submersible

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

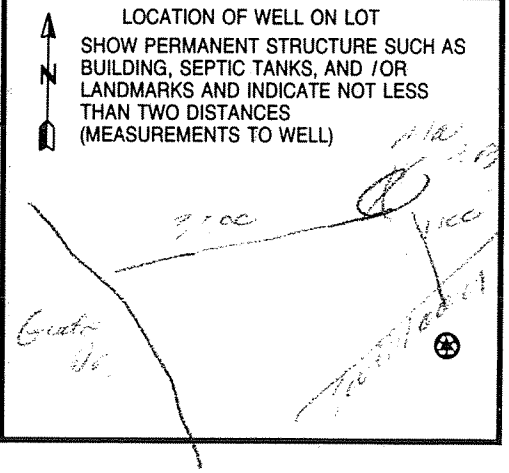
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.

CAPACITY: GALLONS PER MINUTE (to nearest gallon)
PUMP HORSE POWER
PUMP COLUMN LENGTH (nearest ft.)

CASING HEIGHT (circle appropriate box and enter casing height)
[+] above / [–] below LAND SURFACE
12 (nearest foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



C 1 | 3224 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537530

ST/CO USE ONLY
DATE Received MM DD YY
8 13

DATE WELL COMPLETED MM 6 DD 18 YY 10
15 20

Depth of Well 22 25 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" MO - 95 - 1140
28 29 30 31 32 33 34 35 36 37

OWNER Grade (last name) (first name)
STREET OR RFD 606 S Grade Drive TOWN Rockville
SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown wet	0	25	
F to Coarse			
Silt			

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y no N

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M D 063

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 26 D 0606

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y no N (44)

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM (45 46) BENTONITE CLAY BC (45 46)

NO. OF BAGS 1 NO. OF POUNDS 70

GALLONS OF WATER 7

DEPTH OF GROUT SEAL (to nearest foot)
from 0 (48) ft. TOP (52) to 2 (54) ft. BOTTOM (58)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
- ST STEEL
- CO CONCRETE
- PL PLASTIC
- OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	2 (63 64)	5 (66 70)

OTHER CASING (if used) — EACH CASING

	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below
- ST STEEL
- BR BRASS
- BRONZE
- PL PLASTIC
- HO OPEN HOLE
- OT OTHER

C 2

DEPTH (nearest ft.) — EACH SCREEN

1 (8 9)	PL (11 15)	5 (17 21)	
2 (23 24)	(26 30)	(32 36)	
3 (38 39)	(41 45)	(47 51)	

SLOT SIZE 1 0 2 .2 3 0

DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 (68)

from	to
2	25

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (70) (E.R.O.S.) (72) W Q (74 75 76)
TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)

PUMPING RATE (gal. per min.) (11 15)

METHOD USED TO MEASURE PUMPING RATE

WATER LEVEL (distance from land surface)

BEFORE PUMPING (17 20) ft.

WHEN PUMPING (22 25) ft.

TYPE OF PUMP USED (for test)
- A air (27)
- P piston (27)
- T turbine (27)
- C centrifugal (27)
- R rotary (27)
- O other (describe below) (27)
- J jet (27)
- S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)

PUMP HORSE POWER (37 41)

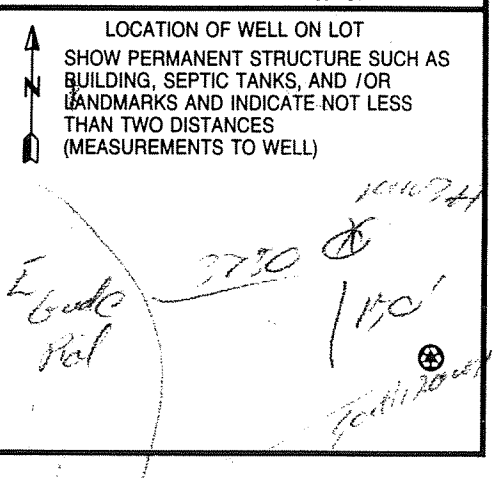
PUMP COLUMN LENGTH (nearest ft.) (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)
- + above (49)
- − below (49)

LAND SURFACE

(nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



C 1 3223

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537530

ST/CO USE ONLY DATE Received MM DD YY 8 13

DATE WELL COMPLETED MM DD YY 6 22 10 (15–20)

Depth of Well 22 96 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" MO - 95 - 1139 (28 29 30 31 32 33 34 35 36 37)

OWNER Goode [illegible] (last name) (first name)

STREET OR RFD 600 E Goode TOWN Rockville MD

SUBDIVISION ______ SECTION ______ LOT ______

WELL LOG

Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown wet Fill	0	35	
Rocky	35	96	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y no N (circled N)

CIRCLE APPROPRIATE LETTER

A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

E ELECTRIC LOG OBTAINED

P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M G D 0 6 3

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) [signature]

LIC. NO. 3 G D 0 6 6

[signature]

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y (circled) no N 44 44

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT CM (circled) 45 46 BENTONITE CLAY BC 45 46

NO. OF BAGS 6 NO. OF POUNDS 600

GALLONS OF WATER 42

DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. (48 TOP 52) to 68 ft. (54 BOTTOM 58) (enter 0 if from surface)

CASING RECORD

casing types insert appropriate code below

ST STEEL · CO CONCRETE · PL PLASTIC (circled) · OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	2 (63 64)	76 (66 70)

EACH CASING — OTHER CASING (if used): diameter inch; depth (feet) from to — (crossed out)

SCREEN RECORD

screen type or open hole insert appropriate code below

ST STEEL · BR BRASS BRONZE · HO OPEN HOLE · PL PLASTIC (circled) · OT OTHER

C 2 (1 2)

EACH SCREEN — DEPTH (nearest ft.)

1	0 (8 9)	76 (11 15)	96 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 0 2 2 3 0

DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK from 70 to 96

IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (E.R.O.S.) W Q

70 TELESCOPE CASING · 72 LOG INDICATOR · 74 75 76 OTHER DATA

C 3 (1 2)

PUMPING TEST

HOURS PUMPED (nearest hour) ____ 8 9

PUMPING RATE (gal. per min.) ____ 11 15

METHOD USED TO MEASURE PUMPING RATE ____

WATER LEVEL (distance from land surface)

BEFORE PUMPING ____ 17 20 ft.

WHEN PUMPING ____ 22 25 ft.

TYPE OF PUMP USED (for test)

A air · P piston · T turbine · C centrifugal · R rotary · O other (describe below) · J jet · S submersible (27)

PUMP INSTALLED

DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. ____ 29

CAPACITY: GALLONS PER MINUTE (to nearest gallon) ____ 31 35

PUMP HORSE POWER ____ 37 41

PUMP COLUMN LENGTH (nearest ft.) ____ 43 47

CASING HEIGHT (circle appropriate box and enter casing height)

+ above (circled) 48 — LAND SURFACE — − below 49 — 12 (50 51) (nearest foot)

LOCATION OF WELL ON LOT

SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

DENV-CR00 OWNER

C 1 3226 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537537

ST/CO USE ONLY
DATE Received MM DD YY
8 13

DATE WELL COMPLETED MM 7 DD 6 YY 16
15 20

Depth of Well 22 24 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL"
MO - 95 - 1151
28 29 30 31 32 33 34 35 36 37

OWNER Grade Ramsdell (last name) (first name)
STREET OR RFD 601 E Gude Drive TOWN Rockville
SUBDIVISION _____ SECTION _____ LOT _____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Gravel at top	0	25	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y / no N

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. MD 363
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
LIC. NO. MD 666

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y / no N (44)

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM (45 46) BENTONITE CLAY BC (45 46)

NO. OF BAGS 1 NO. OF POUNDS 50
GALLONS OF WATER 7
DEPTH OF GROUT SEAL (to nearest foot)
from 0 (48 TOP 52) ft. to 2 (54 BOTTOM 58) ft.
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below:
ST STEEL — CO CONCRETE — PL PLASTIC — OT OTHER

MAIN CASING TYPE: PL (60 61)
Nominal diameter top (main) casing (nearest inch)! 2 (63 64)
Total depth of main casing (nearest foot) 5 (66 70)

OTHER CASING (if used) — EACH CASING
	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below:
ST STEEL — BR BRASS BRONZE — HO OPEN HOLE — PL PLASTIC — OT OTHER

C 2 (1 2)

DEPTH (nearest ft.) — EACH SCREEN
		from (8 9)	(11 15)	to (17 21)
1	PL	5		25
2				
3				

SLOT SIZE 1 02 2 3 0

DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK — from 2 to 25
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 (68)

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (70) (E.R.O.S.) (72) W Q (74 75 76)
TELESCOPE CASING — LOG INDICATOR — OTHER DATA

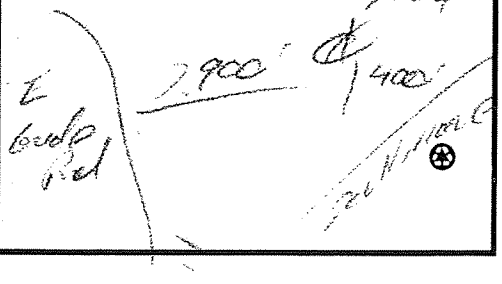
C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)
PUMPING RATE (gal. per min.) (11 15)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING (17 20) ft.
WHEN PUMPING (22 25) ft.

TYPE OF PUMP USED (for test) (27)
A air — P piston — T turbine — C centrifugal — R rotary — O other (describe below) — J jet — S submersible

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)
CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)
PUMP HORSE POWER (37 41)
PUMP COLUMN LENGTH (nearest ft.) (43 47)
CASING HEIGHT (circle appropriate box and enter casing height)
+ above / – below LAND SURFACE (49)
2 (nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



C 1 3211 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 539155

ST/CO USE ONLY
DATE Received MM DD YY
8 13

DATE WELL COMPLETED MM 6 DD 22 YY 10
15 20

Depth of Well 22 [illegible] 26
(TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL"
MO - 95 - 1149
28 29 30 31 32 33 34 35 36 37

OWNER GUDE LANDFILL (last name)
STREET OR RFD 600 E. GUDE DRIVE (first name) TOWN ROCKVILLE
SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Fill	0	3	
[illegible]	3	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y / no N

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. MD 063

DRILLERS SIGNATURE
(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. MD 066

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y / no N (44)

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM (45 46) BENTONITE CLAY BC (45 46)

NO. OF BAGS 1 NO. OF POUNDS 50
GALLONS OF WATER 7

DEPTH OF GROUT SEAL (to nearest foot)
from 0 (48 TOP 52) ft. to 3 (54 BOTTOM 58) ft.
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
- ST STEEL
- CO CONCRETE
- PL PLASTIC
- OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	7 (63 64)	5 (66 70)

OTHER CASING (if used) — EACH CASING

diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below
- ST STEEL
- BR BRASS / BRONZE
- PL PLASTIC
- HO OPEN HOLE
- OT OTHER

C 2 — DEPTH (nearest ft.)

EACH SCREEN

1 (8 9)	11 (15)	17 (21)
2 (23 24)	26 (30)	32 (36)
3 (38 39)	41 (45)	47 (51)

SLOT SIZE 1 2 2 2 3 0

DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

from	to
2	25

(68)

MDE USE ONLY
(NOT TO BE FILLED IN BY DRILLER)
T (70) (E.R.O.S.) (72) W Q (74 75 76)
TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)

PUMPING RATE (gal. per min.) (11 15)

METHOD USED TO MEASURE PUMPING RATE

WATER LEVEL (distance from land surface)

BEFORE PUMPING (17 20) ft.

WHEN PUMPING (22 25) ft.

TYPE OF PUMP USED (for test)
- A air (27)
- P piston (27)
- T turbine (27)
- C centrifugal (27)
- R rotary (27)
- O other (describe below) (27)
- J jet (27)
- S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)

PUMP HORSE POWER (37 41)

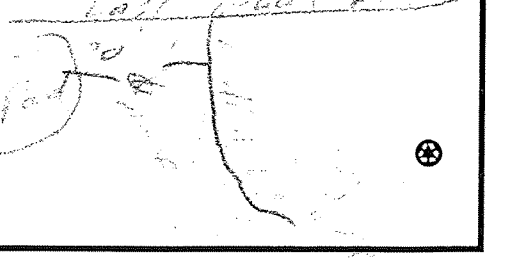
PUMP COLUMN LENGTH (nearest ft.) (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)
- + above (49) LAND SURFACE
- – below (49)

(nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N



DENV-CR00 OWNER

C 1 3212 — SEQUENCE NO. (MDE USE ONLY)

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537155

ST/CO USE ONLY
DATE Received MM DD YY

DATE WELL COMPLETED: MM 6 DD 24 YY

Depth of Well: 53 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": MO - 95 - 1147

OWNER Trinidad Landfill (last name / first name)

STREET OR RFD 600 E. Gude Drive TOWN Rockville MD 20850

SUBDIVISION ____ SECTION ____ LOT ____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Overburden & Hard Sand	0	30	
Rock	30	53	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes [Y] no [N]

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M D 263

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: M D 266

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes [Y] no [N]

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [C M] BENTONITE CLAY [B C]

NO. OF BAGS 4 NO. OF POUNDS 200

GALLONS OF WATER 28

DEPTH OF GROUT SEAL (to nearest foot)

from 0 ft. (TOP) to 28 ft. (BOTTOM)

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below: [S T] STEEL, [C O] CONCRETE, [P L] PLASTIC, [O T] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL	2	33

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole insert appropriate code below: [S T] STEEL, [B R] BRASS BRONZE, [P L] PLASTIC, [H O] OPEN HOLE, [O T] OTHER

C 2

EACH SCREEN	DEPTH (nearest ft.)	
1	PL 33	53
2		
3		

SLOT SIZE 1 0 2 2 3 0

DIAMETER OF SCREEN 2 (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68: from 28 to 53

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T ____ (E.R.O.S.) ____ W Q ____

TELESCOPE CASING ____ LOG INDICATOR ____ OTHER DATA ____

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) ____

PUMPING RATE (gal. per min.) ____

METHOD USED TO MEASURE PUMPING RATE ____

WATER LEVEL (distance from land surface)

BEFORE PUMPING ____ ft.

WHEN PUMPING ____ ft.

TYPE OF PUMP USED (for test)
- [A] air
- [P] piston
- [T] turbine
- [C] centrifugal
- [R] rotary
- [O] other (describe below)
- [J] jet
- [S] submersible

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. ____

CAPACITY: GALLONS PER MINUTE (to nearest gallon) ____

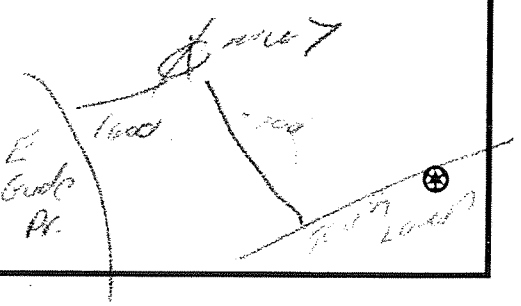
PUMP HORSE POWER ____

PUMP COLUMN LENGTH (nearest ft.) ____

CASING HEIGHT (circle appropriate box and enter casing height)
- [+] above LAND SURFACE
- [–] below

12 (nearest foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

C 1 **3213**
1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

SEQUENCE NO. (MDE USE ONLY)

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537155

ST/CO USE ONLY
DATE Received MM DD YY
8 13

DATE WELL COMPLETED MM DD YY 6 23 10 (15 20)

Depth of Well 22 30 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" MC-95-1148
28 29 30 31 32 33 34 35 36 37

OWNER Gude Landfill (last name, first name)
STREET OR RFD 600 E Gude Dr TOWN Rockville
SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown F? soil	0	15	
Same wet	15	30	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y no N

CIRCLE APPROPRIATE LETTER
- **A** A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- **E** ELECTRIC LOG OBTAINED
- **P** TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M 6D 063
[signature]
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 56D 064
[signature]
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y no N (44)
TYPE OF GROUTING MATERIAL (Circle one)
CEMENT C M (45 46) BENTONITE CLAY B C (45 46)
NO. OF BAGS 1 NO. OF POUNDS 94
GALLONS OF WATER 7
DEPTH OF GROUT SEAL (to nearest foot)
from 0 ft. (48 TOP 52) to 3 ft. (54 BOTTOM 58)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
S T STEEL; C O CONCRETE; P L PLASTIC; O T OTHER

MAIN CASING TYPE (60 61)	Nominal diameter top (main) casing (nearest inch)! (63 64)	Total depth of main casing (nearest foot) (66 70)
PL	2	10

OTHER CASING (if used) EACH CASING — diameter inch, depth (feet) from to

SCREEN RECORD
screen type or open hole insert appropriate code below
S T STEEL; B R BRASS BRONZE; H O OPEN HOLE; P L PLASTIC; O T OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN	Type	From	To
1 (8 9)	PL	10 (11 15)	30 (17 21)
2 (23 24)		(26 30)	(32 36)
3 (38 39)		(41 45)	(47 51)

SLOT SIZE 1 .02 2 .2 3 0

DIAMETER OF SCREEN (56 60) (NEAREST INCH)

GRAVEL PACK from 5 to 30
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

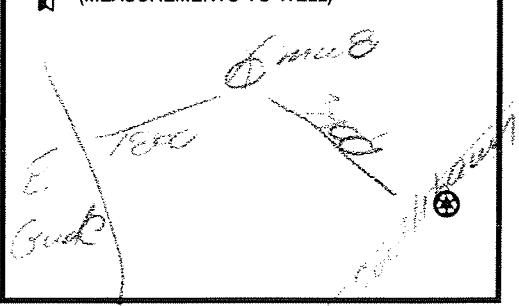
MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (E.R.O.S.) W Q
70 TELESCOPE CASING; 72 LOG INDICATOR; 74 75 76 OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)
PUMPING RATE (gal. per min.) (11 15)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING (17 20) ft.
WHEN PUMPING (22 25) ft.
TYPE OF PUMP USED (for test)
A air; P piston; T turbine; C centrifugal; R rotary; O other (describe below); J jet; S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.
CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)
PUMP HORSE POWER (37 41)
PUMP COLUMN LENGTH (nearest ft.) (43 47)
CASING HEIGHT (circle appropriate box and enter casing height)
+ above (49) LAND SURFACE
– below (49) 12 (50 51) (nearest) foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



DENV-CR00 OWNER

C 1 3216
1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 55752 1

ST/CO USE ONLY
DATE Received MM DD YY (8–13)

DATE WELL COMPLETED: MM 7 DD 5 YY 10 (15–20)

Depth of Well: 25 (22–26) (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": MO 95-1141 (28–37)

OWNER: Gude Land Fill (last name / first name)
STREET OR RFD: 600 East Gude Drive TOWN: Rockville MD
SUBDIVISION: SECTION: LOT:

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Asphalt & top	0	1	
Fill	1	3	
Brown fine sand silt	3	15	
Same wash	15	25	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes Y / no N (circled: N)

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M 6D 063
[signature]
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 76D 066
[signature]
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes Y (circled) / no N (44)
TYPE OF GROUTING MATERIAL (Circle one): CEMENT CM (45 46) / BENTONITE CLAY BC (circled) (45 46)
NO. OF BAGS 1 NO. OF POUNDS 50
GALLONS OF WATER 7
DEPTH OF GROUT SEAL (to nearest foot): from 0 ft. (TOP, 48–52) to 2 ft. (BOTTOM, 54–58)
(enter 0 if from surface)

CASING RECORD
casing types — insert appropriate code below: ST STEEL, CO CONCRETE, PL PLASTIC (circled), OT OTHER

MAIN CASING TYPE (60 61)	Nominal diameter top (main) casing (nearest inch)! (63 64)	Total depth of main casing (nearest foot) (66–70)
PL	2	5

OTHER CASING (if used): EACH CASING — diameter inch; depth (feet) from / to — (none)

SCREEN RECORD
screen type or open hole — insert appropriate code below: ST STEEL, BR BRASS BRONZE, HO OPEN HOLE, PL PLASTIC (circled), OT OTHER

C 2

EACH SCREEN	type (8 9)	DEPTH (nearest ft.) from (11–15)	to (17–21)
1	PL	5	25
2			
3			

SLOT SIZE 1 0 2 2 3 0
DIAMETER OF SCREEN 2 (NEAREST INCH) (56–60)

GRAVEL PACK: from 2 to 25
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (70) TELESCOPE CASING — (E.R.O.S.) (72) LOG INDICATOR — W Q (74 75 76) OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)
PUMPING RATE (gal. per min.) (11–15)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING ft. (17–20)
WHEN PUMPING ft. (22–25)
TYPE OF PUMP USED (for test): A air, P piston, T turbine, C centrifugal, R rotary, O other (describe below), J jet, S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO): YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.
CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31–35)
PUMP HORSE POWER (37–41)
PUMP COLUMN LENGTH (nearest ft.) (43–47)
CASING HEIGHT (circle appropriate box and enter casing height): + above / − below (circled) (49) LAND SURFACE: .3 (nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N

1008 [illegible] — 300 — E Gude Dr. — 500 ft to [illegible]

DENV-CR00 OWNER

C 1 | 3215 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537527

ST/CO USE ONLY
DATE Received
MM DD YY
8 13

DATE WELL COMPLETED
MM 6 DD 31 YY 10
15 20

Depth of Well
22 25 26
(TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL"
MO - 95 - 1142
28 29 30 31 32 33 34 35 36 37

OWNER [illegible] (last name) (first name)
STREET OR RFD 600 E. Gude Drive TOWN Rockville MD
SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Top Soil	0	1	
Brown Dry	1	15	
Sand & Silt			
Some Water	15	25	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y no N

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: MD 263
DRILLERS SIGNATURE
(MUST MATCH SIGNATURE ON APPLICATION)
LIC. NO.: MD 666

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y 44 no N 44

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT C M 45 46 BENTONITE CLAY B C 45 46

NO. OF BAGS 1 NO. OF POUNDS
GALLONS OF WATER 7

DEPTH OF GROUT SEAL (to nearest foot)
from 0 (48 TOP 52) ft. to 2 (54 BOTTOM 58) ft.
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
- S T STEEL
- C O CONCRETE
- P L PLASTIC
- O T OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL	2	5
60 61	63 64	66 70

OTHER CASING (if used) — EACH CASING

diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below
- S T STEEL
- B R BRASS
- BRONZE
- P L PLASTIC
- H O OPEN HOLE
- O T OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN

1	PL (8 9)	2 (11 15)	25 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 0 2 2 3 0

DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

from	to
2	25

68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (E.R.O.S.) W Q
70 72 74 75 76
TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)
PUMPING RATE (gal. per min.) (11 15)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING (17 20) ft.
WHEN PUMPING (22 25) ft.

TYPE OF PUMP USED (for test)
- A air (27)
- P piston (27)
- T turbine (27)
- C centrifugal (27)
- R rotary (27)
- O other (describe below) (27)
- J jet (27)
- S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

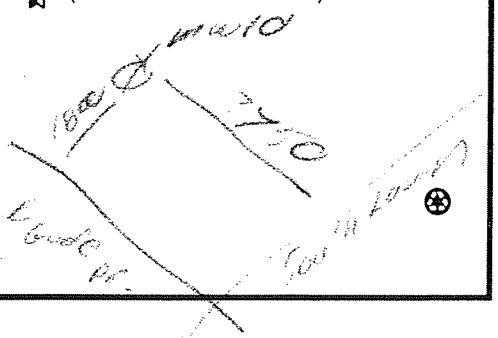
CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)

PUMP HORSE POWER (37 41)

PUMP COLUMN LENGTH (nearest ft.) (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)
+ above (49) / – below (49) LAND SURFACE
5 (nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



C 1 3214
1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537527

ST/CO USE ONLY DATE Received MM DD YY 8 13

DATE WELL COMPLETED MM DD YY: 6 29 10 (15 20)

Depth of Well (22 26): 25 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": MO-95-1143 (28 29 30 31 32 33 34 35 36 37)

OWNER Gude Land fill (last name / first name)
STREET OR RFD 600 E. Gude TOWN Rockville
SUBDIVISION ____ SECTION ____ LOT ____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Top Soil	0	1	
Brown Fly Fade ...	1	15	
Same as ...	15	25	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y no N (N circled)

CIRCLE APPROPRIATE LETTER
A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
E ELECTRIC LOG OBTAINED
P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M 6 D 063

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 76 D 064

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y no N (44)
TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM (45 46) BENTONITE CLAY BC (45 46) (BC circled)
NO. OF BAGS 1 NO. OF POUNDS 50
GALLONS OF WATER 7
DEPTH OF GROUT SEAL (to nearest foot)
from 0 ft. (48 TOP 52) to 2 ft. (54 BOTTOM 58)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
ST STEEL; CO CONCRETE; PL PLASTIC (circled); OT OTHER

MAIN CASING TYPE (60 61)	Nominal diameter top (main) casing (nearest inch)! (63 64)	Total depth of main casing (nearest foot) (66 70)
PL	2	5

OTHER CASING (if used) — EACH CASING
diameter inch | depth (feet) from | to

SCREEN RECORD
screen type or open hole — insert appropriate code below
ST STEEL; BR BRASS BRONZE; HO OPEN HOLE; PL PLASTIC; OT OTHER

C 2

DEPTH (nearest ft.)

EACH SCREEN	type	from	to
1 (8 9, 11 15, 17 21)	PL	5	25
2 (23 24, 26 30, 32 36)			
3 (38 39, 41 45, 47 51)			

SLOT SIZE 1 0 2 2 3 0

DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK from 2 to 25
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

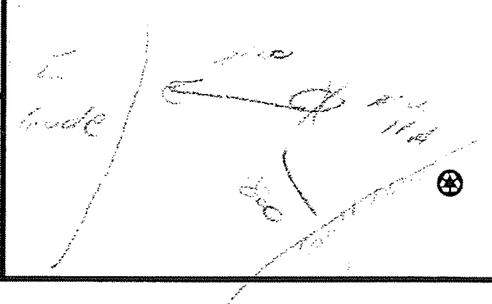
MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (E.R.O.S.) W Q
70 TELESCOPE CASING; 72 LOG INDICATOR; 74 75 76 OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)
PUMPING RATE (gal. per min.) (11 15)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING ____ ft. (17 20)
WHEN PUMPING ____ ft. (22 25)
TYPE OF PUMP USED (for test)
A air; P piston; T turbine; C centrifugal; R rotary; O other (describe below); J jet; S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.
CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)
PUMP HORSE POWER (37 41)
PUMP COLUMN LENGTH (nearest ft.) (43 47)
CASING HEIGHT (circle appropriate box and enter casing height)
+ above (49) LAND SURFACE
− below (49) (circled) 4 (50 51) (nearest foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



DENV-CR00 OWNER

C 1 3218
1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 557527

ST/CO USE ONLY
DATE Received MM DD YY (8–13)

DATE WELL COMPLETED MM DD YY: 6 30 10 (15–20)

Depth of Well: 93 (22–26) (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": MO-95-1136 (28–37)

OWNER: Gude Land Fill (last name / first name)
STREET OR RFD: 600 E Gude Drive TOWN: Rockville
SUBDIVISION ______ SECTION ______ LOT ______

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown Fine Silt	0	25	
Gray weathered rock	25	70	
Hard rock	70	80	
Competent rock	80	93	
T.D. 93			

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes Y / no N (N circled)

CIRCLE APPROPRIATE LETTER
- **A** A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- **E** ELECTRIC LOG OBTAINED
- **P** TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M 6D 263
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 36 D 064

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes Y (circled) / no N (44)
TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM (circled) (45 46) BENTONITE CLAY BC (45 46)
NO. OF BAGS 8 NO. OF POUNDS 800
GALLONS OF WATER 56
DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. (48 TOP 52) to 64 ft. (54 BOTTOM 58)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below: ST STEEL, CO CONCRETE, PL PLASTIC (circled), OT OTHER

MAIN CASING TYPE (60 61)	Nominal diameter top (main) casing (nearest inch)! (63 64)	Total depth of main casing (nearest foot) (66 70)
PL	2	73

OTHER CASING (if used) — EACH CASING: diameter inch; depth (feet) from / to

SCREEN RECORD
screen type or open hole insert appropriate code below: ST STEEL, BR BRASS BRONZE, HO OPEN HOLE, PL PLASTIC (circled), OT OTHER

C 2 (1 2)

EACH SCREEN		DEPTH (nearest ft.)	
1	PL (8 9)	73 (11 15)	93 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 .020 2 .2 3 .0
DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK from 68 to 93
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

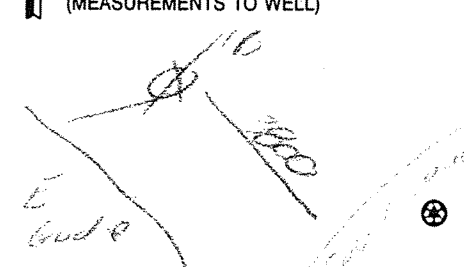
MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (70) TELESCOPE CASING; (E.R.O.S.) (72) LOG INDICATOR; W Q (74 75 76) OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)
PUMPING RATE (gal. per min.) (11 15)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING (17 20) ft.
WHEN PUMPING (22 25) ft.
TYPE OF PUMP USED (for test): A air, P piston, T turbine, C centrifugal, R rotary, O other (describe below), J jet, S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.
CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)
PUMP HORSE POWER (37 41)
PUMP COLUMN LENGTH (nearest ft.) (43 47)
CASING HEIGHT (circle appropriate box and enter casing height)
+ above / − below (circled) (49) LAND SURFACE .5 (nearest) foot (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



DENV-CR00 OWNER

C 1 3217

1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537527

ST/CO USE ONLY
DATE Received MM DD YY (8–13)

DATE WELL COMPLETED MM DD YY (15–20): 12 3 10

Depth of Well (22–26): 25 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" (28–37): MO - 95 - 1144

OWNER: Gude Land Fill (last name / first name)
STREET OR RFD: 600 E. Gude Drive TOWN: Rockville MD
SUBDIVISION: ______ SECTION: ______ LOT: ______

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Asphalt base	0	1	
Fill	1	7	
Clay Fill	7	15	
same mix	15	25	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y no N (N circled)

CIRCLE APPROPRIATE LETTER
- **A** A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- **E** ELECTRIC LOG OBTAINED
- **P** TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M GD 063
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) [signature]

LIC. NO. JGD 066 [signature]

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y no N (44) — Y circled
TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM (45 46) BENTONITE CLAY BC (45 46) — BC circled
NO. OF BAGS 1 NO. OF POUNDS 30
GALLONS OF WATER 7
DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. (48 TOP 52) to 2 ft. (54 BOTTOM 58)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below: ST STEEL, CO CONCRETE, PL PLASTIC (circled), OT OTHER

MAIN CASING TYPE (60 61)	Nominal diameter top (main) casing (nearest inch)! (63 64)	Total depth of main casing (nearest foot) (66 70)
PL	2	5

OTHER CASING (if used) — EACH CASING: diameter inch / depth (feet) from / to (crossed out)

SCREEN RECORD
screen type or open hole insert appropriate code below: ST STEEL, BR BRASS BRONZE, HO OPEN HOLE, PL PLASTIC (circled), OT OTHER

C 2 — EACH SCREEN — DEPTH (nearest ft.)

	Type	from	to
1 (8 9 / 11 15 / 17 21)	PL	5	25
2 (23 24 / 26 30 / 32 36)			
3 (38 39 / 41 45 / 47 51)			

SLOT SIZE 1 0 2 2 3 0
DIAMETER OF SCREEN (56 60) 2 (NEAREST INCH)

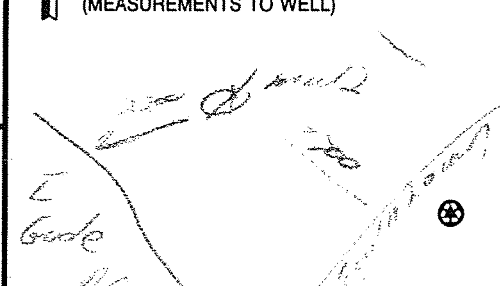
GRAVEL PACK from 2 to 25
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (E.R.O.S.) W Q
70 TELESCOPE CASING 72 LOG INDICATOR 74 75 76 OTHER DATA

C 3
PUMPING TEST
HOURS PUMPED (nearest hour) (8 9)
PUMPING RATE (gal. per min.) (11 15)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING ft. (17 20)
WHEN PUMPING ft. (22 25)
TYPE OF PUMP USED (for test): A air, P piston, T turbine, C centrifugal, R rotary, O other (describe below), J jet, S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.
CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)
PUMP HORSE POWER (37 41)
PUMP COLUMN LENGTH (nearest ft.) (43 47)
CASING HEIGHT (circle appropriate box and enter casing height) + above / − below (49) LAND SURFACE — below circled; -3 (nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



DENV-CR00 OWNER

C 1 3225
1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537537

ST/CO USE ONLY
DATE Received MM DD YY
8 13

DATE WELL COMPLETED MM DD YY 6 29 10
15 20

Depth of Well 22 25 26
(TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" MG-95-1150
28 29 30 31 32 33 34 35 36 37

OWNER Gude Landfill (last name) (first name)
STREET OR RFD 600 Gude Drive TOWN Rockville
SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Topsoil	0	1	
[illegible]	1	[illegible]	
Fresh			
Sand	[illegible]	25	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y no N (circled: N)

CIRCLE APPROPRIATE LETTER
A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
E ELECTRIC LOG OBTAINED
P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M 6D 043
[signature]
DRILLERS SIGNATURE
(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 26D 0446
[signature]
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y no N 44 44 (circled: Y)
TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM 45 46 BENTONITE CLAY BC 45 46 (circled: BC)
NO. OF BAGS 1 NO. OF POUNDS 50
GALLONS OF WATER 7
DEPTH OF GROUT SEAL (to nearest foot)
from 0 ft. to 2 ft.
48 TOP 52 54 BOTTOM 58
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
ST STEEL — CO CONCRETE — PL PLASTIC (circled) — OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	2 (63 64)	5 (66 70)

OTHER CASING (if used)
EACH CASING — diameter inch — depth (feet) from — to
(crossed out)

SCREEN RECORD
screen type or open hole insert appropriate code below
ST STEEL — BR BRASS BRONZE — HO OPEN HOLE — PL PLASTIC (circled) — OT OTHER

C 2
1 2

DEPTH (nearest ft.)

EACH SCREEN	Type	from	to
1	PL (8 9)	5 (11 15)	25 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 0 2 2 3 0
DIAMETER OF SCREEN 2 (NEAREST INCH)
56 60

GRAVEL PACK from 2 to 25
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68
68

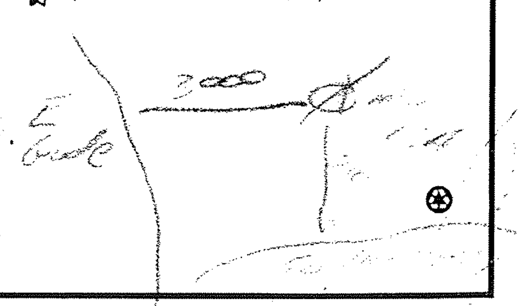
MDE USE ONLY
(NOT TO BE FILLED IN BY DRILLER)
T (E.R.O.S.) W Q
70 72 74 75 76
TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3
1 2

PUMPING TEST
HOURS PUMPED (nearest hour) 8 9
PUMPING RATE (gal. per min.) 11 15
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING 17 20 ft.
WHEN PUMPING 22 25 ft.
TYPE OF PUMP USED (for test)
A air 27 — P piston 27 — T turbine 27
C centrifugal 27 — R rotary 27 — O other (describe below) 27
J jet 27 — S submersible 27

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. 29
CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 35
PUMP HORSE POWER 37 41
PUMP COLUMN LENGTH (nearest ft.) 43 47
CASING HEIGHT (circle appropriate box and enter casing height)
+ above 49 (circled) — LAND SURFACE — − below 49 — 2 (nearest foot) 50 51

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



DENV-CR00 OWNER

C 1 | 3227 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 537557

ST/CO USE ONLY
DATE Received MM DD YY
8 13

DATE WELL COMPLETED MM DD YY: 6 18 10 (15–20)

Depth of Well: 22 90 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": MC-95-1152 (28–37)

OWNER Gude (last name) Howard (first name)

STREET OR RFD 600 E Gude Drive TOWN Rockville

SUBDIVISION ____ SECTION ____ LOT ____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown Sand & silt	0	20	
Weathered rock & sand	20	68	
Comp. rock	68	95	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes N / no Y

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. MD063

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. MD066

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes Y / no N (44)

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT CM (45 46) BENTONITE CLAY BC (45 46)

NO. OF BAGS 6 NO. OF POUNDS 600

GALLONS OF WATER 42

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (48 TOP 52) ft. to 20 (54 BOTTOM 58) ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

ST STEEL; CO CONCRETE; PL PLASTIC; OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	2 (63 64)	75 (66 70)

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below

ST STEEL; BR BRASS BRONZE; PL PLASTIC; HO OPEN HOLE; OT OTHER

C 2

DEPTH (nearest ft.)

EACH SCREEN		from	to
1	PL (8 9)	75 (11 15)	95 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 0 2 2 3 0

DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK — from 70 to 95

IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 (68)

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) ____ (8 9)

PUMPING RATE (gal. per min.) ____ (11 15)

METHOD USED TO MEASURE PUMPING RATE ____

WATER LEVEL (distance from land surface)

BEFORE PUMPING ____ ft. (17 20)

WHEN PUMPING ____ ft. (22 25)

TYPE OF PUMP USED (for test)

A air (27); P piston (27); T turbine (27); C centrifugal (27); R rotary (27); O other (describe below) (27); J jet (27); S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO): YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon) ____ (31 35)

PUMP HORSE POWER ____ (37 41)

PUMP COLUMN LENGTH (nearest ft.) ____ (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)

+ above (49) / – below (49) LAND SURFACE

22 (nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)